Summary of Errata and Clarifications to the HDCP WHDI Specification Rev 2.0

Page 7, change HDCP System definition to
HDCP System. An HDCP System consists of an HDCP Transmitter, zero or more HDCP Repeaters and one or more HDCP Receivers connected through their HDCP-protected interfaces in a tree topology; whereas the said HDCP Transmitter is the HDCP Device most upstream, and receives the Audiovisual Content from one or more Upstream Content Control Functions. All HDCP Devices connected to other HDCP Devices in an HDCP System over HDCP-protected Interfaces are part of the HDCP System.

Page 16, Section 2.3, replace the second paragraph with
In the case of a locality check failure due to expiration of the watchdog timer at the HDCP Transmitter, locality check must be reattempted by the HDCP Transmitter 1023 additional times (for a total of 1024 trials) with the transmission of an LC_Init message containing a new rn. Failure of locality check due to timeout for 1024 trials results in an authentication failure and the authentication protocol is aborted (See Section 2.7 on handling authentication failures). A locality check failure due to mismatch of L and L' also results in an authentication failure and the authentication protocol is aborted.

Page 24, Section 2.9, replace Transition A2:H1 with
Transition A2:H1. This transition occurs on 1024 consecutive locality check failures due to expiration of the watchdog timer at the HDCP Transmitter. A locality check failure due to mismatch of L and L' also causes this transition.

Page 25, Section 2.9.1, replace the sentences
For each of its HDCP-protected interface ports connected to an HDCP Repeater that have reached the authenticated state, State A5 and that will transmit the content stream received from a specific instance of the Upstream Content Control Function, the HDCP Transmitter computes the total number of HDCP Devices connected to each HDCP-protected interface port by incrementing the received DEVICE_COUNT on those ports by one (to account for the connected HDCP Repeater).
Total_Port_Device_Count = DEVICE_COUNT + 1
with
For each of its HDCP-protected interface ports connected to an HDCP Repeater or HDCP Receiver that have reached the authenticated state, State A5 and that will transmit the content stream received from a specific instance of the Upstream Content Control Function, the HDCP Transmitter computes the total number of HDCP Devices connected to each HDCP-protected interface port by incrementing the DEVICE_COUNT on those ports by one (to account for the connected HDCP Repeater or HDCP Receiver), where the transmitter sets the

DEVICE_COUNT to 0 on a port with a connected HDCP Receiver that is not an HDCP Repeater.

Total_Port_Device_Count = DEVICE_COUNT + 1, where DEVICE_COUNT = 0 on a port with a connected HDCP Receiver that is not an HDCP Repeater

Page 26, under Transition Any State:M0, replace the first sentence with

The HDCP Transmitter transitions in to the Idle state when content protection is not desired by the Upstream Content Control Function.

Page 26, under Transition M0:M1, replace the sentence with

The transition occurs when content protection is desired by the Upstream Content Control Function and authentication has been initiated by the HDCP Transmitter on any of its HDCP-protected Interface ports by transmission of an AKE_Init message.

Page 32, Section 2.11.2, replace Transition F2:P1 with

Transition F2:P1. This transition occurs on 1024 consecutive locality check failures due to expiration of the watchdog timer at the downstream side. A locality check failure due to mismatch of L and *L'* also causes this transition.

Page 51, in Table 5.1, replace the Function column corresponding to SRM ID field with

A value of 0x9 signifies that the message is for HDCP 2. All other values are reserved. SRMs with values other than 0x9 must be ignored.

Appendix D.   Test Vectors

D.1 Facsimile Keys
Note: The facsimile keys provided must be used ONLY for test purposes.

All values are provided in big-endian order.

Table D.1 provides facsimile key information for transmitter T1.

	Value in Hex
Global Constant lc_{128}	93 ce 5a 56 a0 a1 f4 f7 3c 65 8a 1b d2 ae f0 f7

Table D.1

Table D.2 provides the facsimile public parameters associated with the DCP LLC key $kpub_{dcp.}$ These parameters are used only for test purposes. They are not used in production devices or SRMs.

	Value in Hex
Modulus n	A2 C7 55 57 54 CB AA A7 7A
	27 92 C3 1A 6D C2 31 CF 12
	C2 24 BF 89 72 46 A4 8D 20
	83 B2 DD 04 DA 7E 01 A9 19
	EF 7E 8C 47 54 C8 59 72 5C
	89 60 62 9F 39 D0 E4 80 CA
	A8 D4 1E 91 E3 0E 2C 77 55
	6D 58 A8 9E 3E F2 DA 78 3E
	BA D1 05 37 07 F2 88 74 0C
	BC FB 68 A4 7A 27 AD 63 A5
	1F 67 F1 45 85 16 49 8A E6
	34 1C 6E 80 F5 FF 13 72 85
	5D C1 DE 5F 01 86 55 86 71
	E8 10 33 14 70 2A 5F 15 7B
	5C 65 3C 46 3A 17 79 ED 54
	6A A6 C9 DF EB 2A 81 2A 80
	2A 46 A2 06 DB FD D5 F3 CF
	74 BB 66 56 48 D7 7C 6A 03
	14 1E 55 56 E4 B6 FA 38 2B
	5D FB 87 9F 9E 78 21 87 C0
	0C 63 3E 8D 0F E2 A7 19 10
	9B 15 E1 11 87 49 33 49 B8
	66 32 28 7C 87 F5 D2 2E C5
	F3 66 2F 79 EF 40 5A D4 14
	85 74 5F 06 43 50 CD DE 84
	E7 3C 7D 8E 8A 49 CC 5A CF
	73 A1 8A 13 FF 37 13 3D AD
	57 D8 51 22 D6 32 1F C0 68
	4C A0 5B DD 5F 78 C8 9F 2D
	3A A2 B8 1E 4A E4 08 55 64
	05 E6 94 FB EB 03 6A 0A BE
	83 18 94 D4 B6 C3 F2 58 9C

	7A 24 DD D1 3A B7 3A B0 BB E5 D1 28 AB AD 24 54 72 0E 76 D2 89 32 EA 46 D3 78 D0 A9 67 78 C1 2D 18 B0 33 DE DB 27 CC B0 7C C9 A4 BD DF 2B 64 10 32 44 06 81 21 B3 BA CF 33 85 49 1E 86 4C BD F2 3D 34 EF D6 23 7A 9F 2C DA 84 F0 83 83 71 7D DA 6E 44 96 CD 1D 05 DE 30 F6 1E 2F 9C 99 9C 60 07
Public Exponent e	03

Table D.2

Table D.3 and Table D.4 provide the facsimile certificates ($cert_{rx}$) for receivers R1 and R2.

As provided in Table 2.1 of High-bandwidth Digital Content Protection System, Revision 2.0, Mapping HDCP to WHDI specification, the certificate format consists of 40-bit Receiver ID, followed by 1048-bit Receiver Public Key, 16-bit Reserved and 3072-bit Signature fields. All values are stored in big-endian format.

For example, in Table D.3, 0x745bb8bd04 is the Receiver ID which is followed by Receiver Public Key, Reserved and Signature fields.

	Value (Sequence of Hexadecimal bytes) for R1
Certificate ($cert_{rx}$)	74 5b b8 bd 04 bc 83 c7 95 78 f9 0c 91 4b 89 38 05 5a a4 ac 1f a8 03 93 82 79 75 af 66 22 de 43 80 8d cd 5d 90 b8 3c b3 d8 9e b0 0d 09 44 f4 3f 5f ab b9 c4 c9 96 ef 78 b5 8f 69 77 b4 7d 08 14 9c 81 a0 8f 04 1f a0 88 e1 20 c7 34 4a 49 35 65 99 cf 53 19 f0 c6 81 76 05 5c b9 de dd ab 3d b0 92 a1 23 4f 0c 71 30 42 78 f6 55 ae bd 36 25 8e 25 0d 4e 5e 8e 77 6a 60 e3 c1 e9 ee cd 2b 9e 18 63 97 d4 e6 75 01 00 01 00 00 1d 0a 61 ea ab f8 a8 2b 02 69 a1 34 fd 91 ac 2b f2 8f 34 8b d4 84 fa 62 bc 01 4a 4a a2 b2 14 bf b5 f4 df ac 80 93 0d 13 ec 9c e5 d8 34 70 51 9a 66 80 eb be cc 7e 45 f0 e6 39 63 84 c9 b9 8e 8c af 9c a9 d4 0e eb 9a 57 2a 17 41 ca 97 f3 19 96 b5 5d 0f 30 a3 84 e5 73 a2 ed 05 69 7a 22 ce 84 1f 3e 39 9e 28 76 c9 bc 89 5b 70 b1 7b f4 ed b6 74 12 ab 48 29 64 ce 6c 60 04 eb a9 7a a2 15 a6 58 9a ad 32 c7 53 39 e5 fe f0 37 a7 a0 c5 ff ec d9 b0 05 bb 25 13 a0 a4 c7 0b 2a 5d c6 8f 51 11 cb 36 ed 5c 17 7e 22 20 c3 eb 40 8c 67 bb 1c d2 47 b0 e0 bd e7 4c cd 5d

d5	23	12	f8	3b	1d	91	3b	f3	c7	60	ea	90	24
48	e5	92	21	6c	f6	d9	5e	76	8d	2b	86	a6	7c
16	ae	a8	36	08	a0	37	14	1a	d7	03	e1	40	31
ca	6c	95	e0	10	b0	43	cf	b7	e0	30	05	b9	ac
b7	08	68	cd	7e	11	47	2a	03	3b	eb	74	c8	19
62	8b	2f	11	91	b6	06	4f	e0	2a	44	20	43	29
13	1f	dd	d0	4a	11	6c	0e	83	bf	22	62	3b	eb
ec	d7	76	28	ba	64	88	42	c8	73	a7	9e	4a	69
3a	b2	0c	4b	3a	d9	50	db	7c	51	ee	15	e0	6b
2c	63	a6	91	57	dd	bf	17	47	23	ad	15	cb	b9
91	18	0b	51	8f	f9	1c	51	67	c1	0b	78	f5	d9
55	dc	48	e4	c0	83	a5	df	75	e2	dc	88	d2	c6
dd	df	1f	37	90	35	f6	fd	da	e0	04	32	69	c1
af	d9	f9	11	c5	aa	74	58	32	1c	71	aa	a7	14
fb	23	17	22										

Table D.3

	Value (Sequence of Hexadecimal bytes) for R2
Certificate ($cert_{rx}$)	8b a4 47 42 fb c9 1b 82 e2 76 7f 90 4f e9 12 33 7c 21 1f 7b 25 da 76 de ae 59 70 f7 c2 e7 e0 4a cf bd 5b ba 1c 36 4e e3 78 4c 92 6a 3c d8 c1 e9 51 a9 35 eb d8 e8 d5 3e 3b 1d 00 c1 16 16 d0 58 eb 2a 4b a0 76 9c d0 e4 b2 23 dc aa 37 07 e5 85 1a aa 13 55 01 4e ed 88 ca 3f fb c5 58 46 91 ec 35 99 08 1c a1 22 64 e8 3c 2e 70 df a9 10 14 81 46 a2 38 08 ef 1b d2 46 ee 38 0d 6d 92 d3 f2 02 e7 e4 29 ad 0d 01 00 01 00 00 91 18 81 a5 cd ab 78 50 ad 1d 3b 77 be 51 32 9f 04 e6 3e f7 01 39 f2 59 98 75 9d 29 12 33 39 b4 80 91 9d 6a ff 0d 5c 59 22 43 77 fc ed c2 40 9d e2 d1 4b ff 02 78 36 d3 ad cb a6 d3 d3 9d cc ff cb 3c a3 cb fd df cf e2 85 a8 bd a2 f6 60 06 b2 9b 53 c4 d6 22 bd 65 3c 6f 40 01 7c 2c 78 89 31 70 47 56 88 f5 56 33 f2 0a 91 27 b1 68 5f 84 98 1d 37 bd 69 11 6d 60 ca 01 44 be fa 92 1f ec 15 be 37 68 d1 dc cc 66 7c c4 8b 78 51 d9 81 df aa e2 70 2f 02 59 10 64 b2 93 6d 09 23 a9 7d 0a db 8a 34 53 ca e2 6a 6d 39 fb 25 5e 38 86 eb 4d a1 c1 ea bd ac 1d 14 46 ac 58 86 55 ec 40 9f dc 4f 80 f2 68 0c 81 a3 df 01 a0 62 44 9e 20 42 89 88 24 b2 6a 40 11 4b 96 33 ba 0d ae 49 98 4b 24 16 5f ff 85 86 4a 09 cd ce 30 f2 fa ff 74 28 40 97 a5 56 29 74 53 a2 34 e4 ee e0 45 b6 d8 a7 9b a0 1a 00 2d ff 8d 2f ed 70 15 c5 e0 11 bb c8 ef 5b 2c b3 12 0f be 88 7c 98 44 3c 65 45 bc 20 ac 07 e2 4c 74 2a b4 b1 0e 47 2a d6 20 19 ce 75 18 45 28 90 4f 84 42 81

	37	ed	1d	0b	48	f7	53	e3	92	f2	eb	df	7a	91
	df	e8	db	b1	c4	fd	fd	c1	ad	4e	cc	be	11	e2
	76	9b	78	2b	b8	f4	0e	9d	05	d6	08	d0	76	2c
	e8	4d	ee	3d	31	da	c4	f7	01	12	8f	5d	94	e6
	cb	15	fe	53	42	b2	51	8c	5d	c7	64	de	14	8f
	af	c1	af	36										

Table D.4

Table D.5 and Table D.6 provide the private keys for receivers R1 and R2.

	Value in Hex for R1
p	dc 1a 02 b8 36 ed 3a e8 74 74 cd 72 28 4a ee 31 90 e4 d0 6a f9 f6 f8 d3 50 29 c2 84 97 98 10 5d ea 7b 88 fd 36 c5 04 99 ad ab 27 0a 5a 2a f9 18 7b 7d b0 c3 cb e3 5a c2 9a 10 f7 c9 9a 18 3e b5
q	db 42 e9 42 e3 2a 78 c9 6f 2b 7b 74 d6 9b ae b9 3d f4 e7 35 90 1c c4 5a b4 22 8c 3c 08 9b a5 29 64 57 29 b2 c4 80 f9 ee c6 94 30 3e d2 33 9f bb 6a 43 03 89 14 9b 8f 20 b8 60 1f 7f 30 3b 20 c1
d mod (p-1)	73 d1 a4 18 b7 9e 81 df 0c 58 e2 3a ee 04 ef ee 59 26 6e 9d bc 47 3f 8c 42 a4 96 dd 1a c0 43 ec 87 94 d5 f3 18 bc f7 bc be 6c 4f b0 dc dd bc 12 2b f9 69 e8 be 03 37 21 2b dd 3d e6 72 15 cb f9
d mod (q-1)	09 1d e6 1f 0e dd 04 3a b3 f1 a5 e7 7c c8 ea 61 ef 6e 90 72 8c b4 75 81 a3 fd cf c0 eb 46 b5 7e 5c 1a b7 b4 24 31 8c b2 dd f4 e9 70 a3 42 dc 40 69 b1 b1 a2 f0 85 6b 55 1b f5 7b 39 c9 a2 9b c1
q^-1 mod p	89 58 a5 a3 63 d9 a9 ee 0e 7e a1 c0 56 2d 59 fc f8 66 1c 26 48 21 9d e0 61 e4 a8 06 97 64 c7 01 77 47 11 8e a2 81 d2 00 dd 5a 1b 8f 7a 1b 2c 68 56 39 cf cd d3 6a ff 73 81 1d 91 3d 48 b4 43 4c

Table D.5

	Value in Hex for R2
p	ff 7d a0 6d 7d c4 eb 8e 60 e2 0b fd b9 00 11 58 55 28 37 b9 28 7a d4 ec c8 49 e3 37 63 37 8f 8d c2 22 75 00 d0 4b c0 a5 a4 97 ad 35 5b 69 2b 17 9f 7d 84 04 5b 61 7d 40 3c a5 ca f9 e7 51 17 e7
q	c9 82 22 32 71 88 06 bc a8 97 58 74 7c cd af 9e 9d 71 eb db c6 7c 24 91 8b da cf f5 6b a1 8e b5 09 87 ca 11 d2 70 f9 81 c7 dd aa a9 0c 1b 16 e7 c3 93 0b 35 80 ca 77 92 a3 f1 8c 6d d7 39 e4 eb
d mod (p-1)	42 5c e0 51 f0 6c 38 ff 57 9c ff 9e 5c f2 6e 8e f2 37 ab 19 b6 31 09 a3 a3 76 c5 c5 3a 49 51 49 72 16 bf 2b 81 ef 5b 4f eb 4b d6 9a d8 6e 9d d9 d9 fc a1 50 fc 67 7b 40 37 40 9d 53 82 49 27 1b
d mod (q-1)	5b 70 74 ea 25 00 8f e6 0e 2e d7 51 cc cc 5d 54 01 a8 0f 5a 24 80 72 eb a4 e5 ff 16 23 e8 24 e4 db d5 45 89 be cf cb 38 ec 24 17 6c 2c 75 22 78 bb 13 bf b3 60 a4 ff 8b 88 5f 74 d4 e7 24 7b 4f

q^-1 mod p	e8 0a 4a 20 24 17 0f ef 3b cb ee 39 49 4a 1f 50 35 e4 d9
	4b 5b 2c 2a af f8 e4 1b 17 04 bf ca 7b fd b2 1d d6 1a bf
	61 c4 46 7c 8d ce 74 39 7e 52 3a 6e 8a 3b a4 bf 07 da 86
	07 eb 17 a2 26 54 9a

Table D.6

Table D.7 provides the global constant (lc_{128}) used for receivers R1 and R2. Note that the same global constant is used in T1, R1 and R2.

	Value in Hex for R1	Value in Hex for R2
Global Constant lc_{128}	93 ce 5a 56 a0 a1 f4 f7 3c 65 8a 1b d2 ae f0 f7	93 ce 5a 56 a0 a1 f4 f7 3c 65 8a 1b d2 ae f0 f7

Table D.7

D.2 Authentication Protocol

Table D.8 provides test vectors generated during the authentication protocol between T1-R1 and T1-R2. The values provided in the table are as generated or received on the transmitter (T1) side.

	Value in Hex for R1	Value in Hex for R2
Authentication and Key Exchange (Without stored k_m)		
r_{tx}	18 fa e4 20 6a fb 51 49	f9 f1 30 a8 2d 5b e5 c3
REPEATER	0x01 (True)	0x00 (False)
Receiver ID (Extracted from certificate $cert_{rx}$)	74 5b b8 bd 04	8b a4 47 42 fb
Certificate signature verification	Hash: 59 45 4b d3 d7 25 7d b5 eb 94 9b 6e e9 72 9c 0f 3b 4b da d3 ac 69 9f b8 b9 2d d3 87 c0 f1 bb 16 Encoded Message EM: 00 01 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff	Hash: cb 3a b7 97 63 e7 be 7c 56 08 41 3c 32 8d 16 da 7f bc 98 f0 03 35 f6 e0 3c a1 ea e5 17 f3 47 37 Encoded Message EM: 00 01 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff

```
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff ff ff ff ff
ff ff ff ff ff ff    ff ff ff 00 30 31 30
ff ff ff ff ff ff    0d 06 09 60 86 48 01
ff ff ff ff ff ff    65 03 04 02 01 05 00
ff ff ff ff ff ff    04 20 cb 3a b7 97 63
ff ff ff ff ff ff    e7 be 7c 56 08 41 3c
ff ff ff ff ff ff    32 8d 16 da 7f bc 98
ff ff ff ff ff ff    f0 03 35 f6 e0 3c a1
ff ff ff ff ff ff    ea e5 17 f3 47 37
ff ff ff ff ff ff
ff ff ff ff ff ff
ff ff 00 30 31 30
0d 06 09 60 86 48
01 65 03 04 02 01
05 00 04 20 59 45
4b d3 d7 25 7d b5
eb 94 9b 6e e9 72
9c 0f 3b 4b da d3
```

	ac 69 9f b8 b9 2d d3 87 c0 f1 bb 16	
$kpub_{rx}$ (Extracted from certificate $cert_{rx}$)	n: bc 83 c7 95 78 f9 0c 91 4b 89 38 05 5a a4 ac 1f a8 03 93 82 79 75 af 66 22 de 43 80 8d cd 5d 90 b8 3c b3 d8 9e b0 0d 09 44 f4 3f 5f ab b9 c4 c9 96 ef 78 b5 8f 69 77 b4 7d 08 14 9c 81 a0 8f 04 1f a0 88 e1 20 c7 34 4a 49 35 65 99 cf 53 19 f0 c6 81 76 05 5c b9 de dd ab 3d b0 92 a1 23 4f 0c 71 30 42 78 f6 55 ae bd 36 25 8e 25 0d 4e 5e 8e 77 6a 60 e3 c1 e9 ee cd 2b 9e 18 63 97 d4 e6 75 e: 01 00 01	n: c9 1b 82 e2 76 7f 90 4f e9 12 33 7c 21 1f 7b 25 da 76 de ae 59 70 f7 c2 e7 e0 4a cf bd 5b ba 1c 36 4e e3 78 4c 92 6a 3c d8 c1 e9 51 a9 35 eb d8 e8 d5 3e 3b 1d 00 c1 16 16 d0 58 eb 2a 4b a0 76 9c d0 e4 b2 23 dc aa 37 07 e5 85 1a aa 13 55 01 4e ed 88 ca 3f fb c5 58 46 91 ec 35 99 08 1c a1 22 64 e8 3c 2e 70 df a9 10 14 81 46 a2 38 08 ef 1b d2 46 ee 38 0d 6d 92 d3 f2 02 e7 e4 29 ad 0d e: 01 00 01
k_m	68 bc c5 1b a9 db 1b d0 fa f1 5e 9a d8 a5 af b9	ca 9f 83 95 70 d0 d0 f9 cf e4 eb 54 7e 09 fa 3b
$E_{kpub}(km)$	Seed: 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 13 14 15 16 17 18 19 1A 1B 1C 1D 1E 1F lhash: e3 b0 c4 42 98 fc 1c 14 9a fb f4 c8 99 6f b9 24 27 ae 41 e4 64 9b 93 4c a4 95 99 1b 78 52 b8 55 $E_{kpub}(km)$: 75 d1 07 f6 9b 7f 1e bd 84 2a 33 e2 89 03 75 b1 27 3c c2 f1 da f8 76 94	Seed: 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 13 14 15 16 17 18 19 1A 1B 1C 1D 1E 1F lhash: e3 b0 c4 42 98 fc 1c 14 9a fb f4 c8 99 6f b9 24 27 ae 41 e4 64 9b 93 4c a4 95 99 1b 78 52 b8 55 $E_{kpub}(km)$: 78 73 6b 24 d6 26 fd 11 36 b5 55 5a a8 be 46 9e 69 a1 ef 19 de d2 43 33 7b e7 e8 88 e2 8e d1 6f 95 b3 56 b7 a0 ac 62 26 57 03 69 03 f9 5c 8b 1d 6a

	9b e0 5e 35 a4 b3 32 a0 b5 ea 75 ef 6f 3a d8 31 3a dd c5 9b de a3 bb 00 39 29 48 93 76 2a e9 e1 b5 17 0c 64 6b d4 12 8f 9b e1 07 b5 a7 9e d6 fd 6e 28 c8 5b d0 c4 01 e7 69 f4 70 ab b8 91 2a 31 4b 86 fd 96 80 20 19 7b 73 ad 7e 78 ae e1 71 07 07 50 2d 3f 43 ff d4 50 4e d7 70 fe cf f2 25 82 ba 43 9e 61 d6 f5 02 84	d5 ab f9 8f 7a 71 51 d6 73 22 9a cd 51 7a 72 29 3f d3 fe fb bf f0 74 89 09 cb c9 cd 57 bb 4a 83 94 01 f1 9e 1f 97 e1 50 84 5c d8 b5 b0 e1 ab f1 15 19 63 29 4f 37 3b a1 ec 14 40 bf db 33 bb 46 da f8 3c a4 73 7e ba 97 2a 18 57 6b d6 f8 58
r_{rx}	3b a0 be de 0c 46 a9 91	e1 7a b0 fd 0f 54 40 52
$dkey_0$	89 9e a9 7a 52 a8 1a 15 a3 d0 08 74 b0 67 7d f4	83 02 a3 c7 57 2c c6 69 f7 0a e7 3f 84 bf 05 65
$dkey_1$	9a 80 a3 a3 1a dd 35 55 24 77 1e 66 8d 8f 5d 2d	8f eb 20 67 68 b0 36 8b c9 15 85 62 8f 5c 34 5b
k_d	89 9e a9 7a 52 a8 1a 15 a3 d0 08 74 b0 67 7d f4 9a 80 a3 a3 1a dd 35 55 24 77 1e 66 8d 8f 5d 2d	83 02 a3 c7 57 2c c6 69 f7 0a e7 3f 84 bf 05 65 8f eb 20 67 68 b0 36 8b c9 15 85 62 8f 5c 34 5b
H	c3 c0 39 2d c8 66 a2 c3 98 07 b4 bc 3c bb 7a d0 e6 1f 49 d5 e7 04 7e 9a ea 8c ac f9 d7 c8 cd 89	ee 6f 40 74 eb 1b d0 7b 35 15 b0 f8 28 6a b5 66 96 e9 39 2b d7 62 be d4 6a 92 d8 d0 a4 18 4d 42
H'	c3 c0 39 2d c8 66 a2 c3 98 07 b4 bc 3c bb 7a d0 e6 1f 49 d5 e7 04 7e 9a ea 8c ac f9 d7 c8 cd 89	ee 6f 40 74 eb 1b d0 7b 35 15 b0 f8 28 6a b5 66 96 e9 39 2b d7 62 be d4 6a 92 d8 d0 a4 18 4d 42
Pairing		
$E_{kh}(k_m)$	Hash of private = SHA256 hash on concatenation of p, q, d mod (p- 1), d mod (q-1), q^-1 mod p i.e.	Hash of private = SHA256 hash on concatenation of p, q, d mod (p-1), d mod (q-1), q^-1 mod p i.e. SHA-256(p ‖q‖d

	SHA-256(p ‖q‖d mod (p-1)‖d mod (q-1)‖q^-1 mod p):	mod (p-1)‖d mod (q-1)‖q^-1 mod p):
	5d 7f 16 2f e1 33 c7 0c 44 b7 f2 95 0d 4b 32 05 34 c6 63 5c 41 11 dc cf c4 24 e1 e5 0c 42 73 7c k_h: 34 c6 63 5c 41 11 dc cf c4 24 e1 e5 0c 42 73 7c $E_{kh}(k_m)$: ce 82 f8 36 56 cb bb af 40 ba 83 17 8c d3 a4 a6	36 85 b9 ee 44 60 49 13 95 e8 05 f0 43 ee 3e 25 ef 5d d8 39 05 34 ae 90 79 89 00 db 83 86 3f d2 k_h: ef 5d d8 39 05 34 ae 90 79 89 00 db 83 86 3f d2 $E_{kh}(k_m)$: 2e ec e5 58 e7 8f 1a 96 d3 bd 40 14 a6 7e 29 3a
m	18 fa e4 20 6a fb 51 49 00 00 00 00 00 00 00 00	f9 f1 30 a8 2d 5b e5 c3 00 00 00 00 00 00 00 00
Locality Check		
r_n	32 75 3e a8 78 a6 38 1c	a0 fe 9b b8 20 60 58 ca
L	1b 57 26 de b5 65 1c 77 31 70 d0 09 4a 14 eb 0d 1f 1c ab a9 fe 84 fd d4 eb 17 52 e3 e8 d0 d6 36	19 16 b1 59 73 be e3 67 f0 56 50 51 44 0f 53 a2 df 53 8d ce e2 58 1f 65 f3 bf 03 0e 68 14 e0 e4
L'	1b 57 26 de b5 65 1c 77 31 70 d0 09 4a 14 eb 0d 1f 1c ab a9 fe 84 fd d4 eb 17 52 e3 e8 d0 d6 36	19 16 b1 59 73 be e3 67 f0 56 50 51 44 0f 53 a2 df 53 8d ce e2 58 1f 65 f3 bf 03 0e 68 14 e0 e4
Session Key Exchange		
k_s	f3 df 1d d9 57 96 12 3f 98 97 89 b4 21 e1 2d e1	f3 df 1d d9 57 96 12 3f 98 97 89 b4 21 e1 2d e1
r_{iv}	40 2b 6b 43 c5 e8 86 d8	9a 6d 11 00 a9 b7 6f 64
dkey$_2$	38 4d eb f3 5d b2 3b 70 dd 68 5d 03 ea 05 6f 75	56 04 d8 41 07 27 f6 5d 70 90 2d 00 e5 b4 29 97
$E_{dkey}(k_s)$	cb 92 f6 2a 0a 24 29 4f 7e 5f 6a 69 c7 a2 eb 05	a5 db c5 98 50 b1 e4 62 09 7d 14 49 cb 01 44 24

Authentication with Repeaters		
Receiver ID$_0$	35 79 6a 17 2e	N/A as R2 is not an
Receiver ID$_1$	47 8e 71 e2 0f	HDCP Repeater
Receiver ID$_2$	74 e8 53 97 a6	
Receiver ID list	35 79 6a 17 2e 47 8e 71 e2 0f 74 e8 53 97 a6	
DEPTH	0x01	
DEVICE_COUNT	0x03	
MAX_DEVS_EXCEEDED	0x00	
MAX_CASCADE_EXCEEDED	0x00	
V	cc d0 09 37 72 d3 c0 cc 4e 9b 8f da 04 1c 6b 66 0b 86 31 47 55 28 9e 9f 75 4f 28 5d 28 6f 32 cf	
V'	cc d0 09 37 72 d3 c0 cc 4e 9b 8f da 04 1c 6b 66 0b 86 31 47 55 28 9e 9f 75 4f 28 5d 28 6f 32 cf	

Table D.8

D.3 Coarse Stream Encryption
Provided below is the input coarse stream to be encrypted at T1.

Frame Number = 1
```
95 0A DC 08 F0 AC 91 48 99 EA 78 5A AE 23 64 E1 ED 01 44 33 E6 5F 58 B9
0B 9E D0 17 E1 2D 72 53 C4 7A A5 A1 6D 81 3F 4B 59 BE 8D EB B0 18 87 29
1B 7B A5 4E 7F 36 44 6B D9 B0 49 55 D0 DA 9B E6 B0 0F 16 ED E3 22 62 B8
6C 0C CD 8B 31 57 AB 95 B2 F8 19 2E 8B 95 2C 65 7E B1 B9 F2 90 DD 27 41
5E 7E 58 FD 75 8B 09 A0 1A F4 B7 EF CF 2B 33 14 CF C8 E3 4E CF 01 89 5F
09 09 A2 9D 60 52 00 02 98 E3 DD 4C 31 51 C7 E4 18 2F FD 6F CE 22 43 95
25 CD 42 C2 16 77 2A 10 E2 26 78 19 28 15 1D BB C0 93 29 C8 5E 57 B9 2C
04 82 62 B4 EB 58 61 BB 06 1A CD AF E6 76 24 4F FB 69 50 41 5F F7 BA 0F
BE 60 07 72 FA F2 B8 C8 B4 EF 0F 05 63 F5 5B E8 E1 B1 4E E3 CB 14 B9 B8
8C A0 76 00 13 C2 0D 07 BF 2E 2B E4 C5 FE 48 AF CB 24 9E 94 0C 8E 55 04
B9 CA CD B0 DE E1 FA 45 63 D6 7E 2E F5 E9 FA 07 61 5A CD 99 31 2F DE 35
D1 77 FD 32 89 BE 9C AD 4B 96 5D 84 36 F7 F8 C1 16 A4 F9 71 0F B3 7D 98
8C 24 BA B1 B8 96 E4 F2 52 C2 EA 60 5E FD DF C4 C2 83 71 F4 B7 FC 3F 78
F7 48 BE F6 FA 4F 9A C3 32 AD 70 BE B5 D4 E6 5C CD F1 02 D9 34 C6 C7 82
FD D9 42 9B 4F CB 6D 55 AD 20 0A ED 8F 0B E9 14 D2 3E 1F C5 06 2A 16 E6
31 2A 88 12 0E CB 24 4A 24 D6 E1 FF 06 25 F2 23 8D 42 20 97 F6 89 27 9A
EC 11 35 BE C3 88 05 A6 0A 7C B7 C7 1E 6B 63 9F 98 19 9E B4 85 6E 24 A9
63 3F DC 09 BC FF A4 99 A7 56 9A D3 8E 56 0E 8B 3A CE 01 5B F5 52 83 E9
E7 24 4A 9F 0E 9D BF A0 97 E8 85 09 5D 97 BE B5 CE 84 83 C6 28 E2 9C 50
9A E8 8F 8B E7 77 56 71 2D C7 91 BC 74 E3 DA F0 D1 FA 88 E5 74 E5 7F 5F
FC 3C 89 A8 32 B6 FE 27 E3 14 9B 18 53 7F 12 45 57 C0 34 28 3C 4B 2F D7
A5 ED CD BA 14 FB 69 1F A1 7E D9 89 8A 06 87 35 CB DD EC E0 F3 6E FF E8
```

```
7A EE D1 63 DA 3F 65 FF E5 A0 90 0E 83 F9 B8 AB A9 5E 72 A3 17 C9 F3 1E
8F 20 78 55 AF CF E4 0E A1 57 1B 1B CE CD 26 F0 0A AD 08 26 75 26 23 C5
E4 EA 32 F2 AE 53 BD 24 97 60 2D 04 6A E2 13 42 77 1D 08 11 41 46 B2 C9
```

Frame Number = 2
```
2A 5E 1A 8A AB E2 1E 20 9D E2 BD CF B7 49 0F 2C 0F FD DD 88 F0 E3 A3 6C
69 61 AB 19 EE E1 47 58 F0 EF 48 4F 91 6C C2 55 7B EB 1F 2C 1C CA 9E 51
37 9C D9 B7 1D 3A 04 8A 4C 4F 65 DC F9 6A 23 02 CB 5A D0 4B C4 41 0D 67
FB B0 BB E7 CD FA CE 38 5E 5B 60 16 6E 67 20 48 A8 70 F2 EA 2A F5 3D 62
38 52 D1 65 8F 8C 0D A5 CE 97 06 B7 CB 91 EE DB 55 AB 97 12 05 85 7D DA
55 B1 2F 83 05 B7 41 7A 45 D0 BA 69 FA E2 39 DC 1E 3E 5A 97 E4 BB A7 38
0D 3D 62 99 74 A1 FE 83 A4 4E 6B AA 4F 77 32 99 D5 B0 B3 CA B2 F3 68 5B
F8 D2 F1 A6 42 55 2F 5F FE 6D 8D 51 22 4A B1 7A E3 11 53 C9 B1 77 BE A2
3C D3 EA F3 18 37 8C 7B AD 2B 4F 00 C8 6C 7F A6 9C 32 76 B1 D2 F8 83 09
6D C9 FF 5A FC 63 F3 7A 52 28 34 41 29 39 B9 56 47 2B B1 9C 3B 9B D8 E3
67 DC 8A 03 99 B0 AB 29 D6 58 23 55 39 5B 3E D6 83 02 3B CD C9 4C 55 24
2A F2 4F 65 FD 58 36 3D 06 D8 2E 53 B5 EE AA 4F C1 48 6C C2 01 A7 48 D0
72 4E C1 2E 91 A8 FE AD D6 EA 18 89 CD 6C 4C 7F F8 08 DD 1B 29 2D 8C AA
E8 02 B0 D0 F6 62 70 64 2F 69 B7 31 53 95 9C 6E 4F B3 18 76 2B E6 A7 00
20 46 34 E3 37 5B 1D DF CB 44 5B E8 E7 C4 8A 3C 75 54 FD C5 05 31 D3 F8
1C DC B7 03 F9 2E 22 6A 88 3D B3 82 D1 4A 36 2F 4F 76 8E 30 40 5D 2C D3
84 79 AD 12 CD 4E FE 2F 3C 40 FF 8F 59 59 DB 67 49 30 D3 FB D1 4F 8D 5C
D1 30 3D E8 19 CF E4 14 F2 64 6B 5B AF 6F 7F 6F E1 CE 6E A2 62 BB 8C 5B
64 84 CA 74 6D 86 BD 63 F1 BD A3 E9 00 7A 8A BC CF 2D 71 8D F6 48 95 D6
72 90 22 74 21 65 E5 4F 62 DD 74 B7 F2 42 7F 4E 80 B8 15 46 29 4E D9 1A
4E 46 84 B7 AD 4F C7 31 C5 7F 59 FC BB 0D 86 5E 57 37 39 A6 36 77 EB E6
4C 4F CF C6 FB BF 4B AA 8B 9F C6 D9 87 18 9F 7F A1 E9 CD 96 77 61 39 9B
59 1E 67 09 5D 27 02 AD FB 3A 72 D0 C2 6B D3 2D 72 4D B7 F1 21 39 F1 78
37 19 8C EF 28 19 E4 AB FB 35 29 DA D9 B2 06 33 A3 C6 60 20 80 E6 3A 5F
AA 9E C3 83 90 8A E6 A6 B7 98 B2 7F 96 B0 13 C6 21 C6 56 83 F4 6B BC D6
```

The encrypted coarse stream generated at transmitter T1 for receiver R2 is provided below.

Frame Number = 1
coarseInputCtr = 0
```
b4 81 4f ab d9 7e 29 25 36 ac 36 82 c7 ec 86 15 3d ff 36 03 c2 04
29 21 6a 4c 3c 6c da 49 48 1c 8f 89 55 cd 7b 4d 22 17 fa 87 42 f0
75 d2 2b e4 9e 7f ce eb c7 80 ef 0b 70 4b 9d 95 53 25 66 30 c1 5f
e0 f9 20 8c b4 d3 74 04 db cc 98 6a 8a 99 c2 7f 4a 2b c6 9f 48 f7
0b 15 e5 93 c4 4e cb 43 09 18 11 32 3b 27 a4 77 03 15 77 31 73 21
d4 30 d3 38 b6 34 4e 38 45 e7 a8 ba 34 05 94 1b 3c a3 18 9f 48 82
1f 7f 4a 9e 22 0a 79 c9 39 d9 60 e2 68 d5 8d f9 aa af b7 42 0b 37
47 c2 a3 eb 99 ff 69 78 df 41 d3 9b 1f b6 f5 f1 46 a0 41 88 bb f0
eb 55 73 74 9b da ac 7f 53 21 b9 79 c2 0a 17 59 14 07 e6 19 13 d3
6b 60 31 00 bd 3f d5 31 6f 8c 15 e1 8e 24 cd 4a 5a 38 3f 3c bd fa
1e 8b f2 36 1a 04 d9 fa 47 06 8d 47 92 a3 f3 eb 82 1a ea c8 01 12
1a ee b2 69 f2 8b 2d c0 7a 93 00 e1 7b aa 63 8b 54 5c fb a6 22 7d
98 c9 83 96 4e 58 f2 9f eb 54 5a 77 b2 a2 fb 1c 21 54 13 89 13 f2
76 06 64 86 35 0c dc da 0a 17 0d ae 9a d9 e2 2e 1e ca 04 ce 42 31
28 a4 53 6b 8f 9c 7a 97 e9 73 28 19 d6 b4 d4 56 36 53 8e 3c c6 85
fd a2 7b 71 4d 9f a8 44 86 fc f9 cb b9 81 35 06 fd 92 0d 50 98 92
23 9a b2 f9 a2 93 db 5e 7f 01 0a 5f 2c 10 c5 48 19 17 95 19 b2 8a
77 79 3b f1 90 a6 cd f0 52 ed 14 5f a7 99 4b 0a fc e5 7d 15 a6 db
8b 4e ef 0a 22 b7 ab 19 e0 c7 7f 74 a5 8e 47 b7 cf 4d 97 a7 be 79
09 2f 09 0c 7d f2 7b b0 25 78 c8 2d ed b2 4a 0b 1a b4 14 d0 94 bd
f8 b1 39 28 c3 e6 ac 42 97 8e 70 ce 73 4e 68 2e b4 5e f7 ba 25 c2
67 6e 94 25 dc 9e 87 0b 3d 93 96 e4 24 66 a9 72 97 17 6b 5c 2b e8
c6 50 78 db 73 4c 41 17 7b 4a b8 89 84 5c e3 1f f0 57 55 fa 38 24
2f f1 5c 7f de d3 1d 12 1d b0 fc 0c 2c a7 44 e3 05 e4 a4 84 28 ba
24 85 31 e3 c7 6b a9 69 47 d1 97 59 d9 a2 7d f5 75 d5 3e 98 2c ab
50 c6 45 a0 6a 6d 07 06 4d 4c 09 f2 29 7a f9 1d f2 a1 51 56 c5 d9
a8 67 5c 25 77 6c fc 60 46 1e 99 8c 87 c7 f4 03 b3 59 65 54 cc 91
83 04 34 cd bd 1b
```

Frame Number = 2
coarseInputCtr = 38
```
b6 56 a6 a5 79 c3 f3 62 a8 1c e7 fe ec 76 a2 2c 86 d2 2a 2e 32 de
8c 38 1f 88 21 36 0b d4 39 58 5e bf 9d da 08 d9 d4 4f 61 93 13 19
f2 8b 2c a2 c0 9c 57 29 bc a1 05 11 2a ae 4f 07 3a 5e 80 4a 6e 30
05 21 6d 6d 52 dc 15 46 f7 d8 31 90 82 00 2d 99 14 c2 42 01 39 a0
c6 71 db 3f 85 0b 22 87 90 85 5b d0 ce 66 fd 3d cb 53 99 f1 85 3b
5f 76 85 0c 59 a4 a1 3e ec 8b 61 e2 d7 06 34 19 42 d7 53 ee 7a 87
4b 7b 48 26 30 7f 3e 18 c1 66 a1 91 5c 4c df 9a 64 33 da 5f 49 f3
91 fc 41 b0 2f 02 59 16 4f 2f af aa 9c be 7c 6c 5a b3 69 be 3a f7
aa aa f9 94 85 5b 2e 36 02 13 91 70 8a 07 e1 0f 5e 11 f5 30 f7 4e
06 be 46 0a fe 32 73 00 33 b7 80 7f 29 c2 98 89 1a 79 49 07 2f df
ae 16 14 50 42 c6 6b c5 f3 f9 e8 ec 64 a8 48 b2 57 6f c6 c9 f5 08
6e fe 5e ee 23 c3 c2 6d 72 2e 88 25 d0 f0 cb 05 bf a9 b8 70 0b 57
b9 15 d8 3b f7 2e a9 97 b7 d7 38 cb f4 08 44 d7 03 07 7b 1c 46 3e
52 b3 ed 9e f0 f0 d9 8f 71 c2 69 f0 e7 1d 02 0c b2 9f a5 26 6e 0f
88 4b 51 3e 7c b6 8d 44 a0 18 6d 1b fd 50 32 a9 82 20 75 b0 59 89
```

```
b1 e3 d8 75 c4 6b fa f4 c4 81 af a1 e3 4e cd ab e9 cd 72 d7 a9 f4
48 6d b9 27 74 0e 1e fd ba 6b ce 41 cb 78 15 1b a6 73 fe 9f 32 19
ca dd ab a6 7b e7 b1 29 00 e5 61 a7 14 07 fc 3f 1a ef 53 e7 b5 ea
9d 35 2d 58 64 fa f4 2b 5c c8 3b 58 26 f5 73 93 c0 f4 87 57 da c9
b8 de b5 0b aa 34 c8 ea 48 39 4e 15 1b 7d 23 11 da 3e 4a 65 2d e0
af e1 53 0b 6d 76 4b 89 05 d0 b1 38 9d 87 d8 29 2b 08 8a 79 24 78
74 51 54 0f 93 47 9f 52 27 37 2b d3 a3 55 64 e7 50 0e cc 55 5f 3d
36 bd 53 80 00 85 b2 b4 4c 3a 0b 6b d0 b2 47 cf 6b 89 6d c7 c1 14
dc 33 a0 6c d6 cd 6b 5e 05 87 7b dc 42 7e 1b 81 96 e5 b8 99 e6 65
5d 7d 33 c1 ab f2 3d de d8 c9 66 bc f7 ab d6 48 89 ca 07 8b 94 5c
cf 37 e8 b1 f2 15 50 e0 d0 76 8e c2 91 82 a4 2d 23 cd 8c 44 76 00
36 88 69 ed 07 2d 34 96 99 41 74 d4 c1 b3 ab 64 75 70 cb 4a de 3d
0e 8c 58 fa 2f e9
```

D.4 Fine Stream Encryption

Provided below is the input fine stream to be encrypted at T1.

Frame Number = 1

0.00000000+0.00000000i	-0.00195313+0.00195313i	0.00390625-0.00390625i
-0.00585938-0.00585938i	0.00781250+0.00781250i	-0.00976563+0.00976563i
0.01171875-0.01171875i	-0.01367188-0.01367188i	0.01562500+0.01562500i
-0.01757813+0.01757813i	0.01953125-0.01953125i	-0.02148438-0.02148438i
0.02343750+0.02343750i	-0.02539063+0.02539063i	0.02734375-0.02734375i
-0.02929688-0.02929688i	0.03125000+0.03125000i	-0.03320313+0.03320313i
0.03515625-0.03515625i	-0.03710938-0.03710938i	0.03906250+0.03906250i
-0.04101563+0.04101563i	0.04296875-0.04296875i	-0.04492188-0.04492188i
0.04687500+0.04687500i	-0.04882813+0.04882813i	0.05078125-0.05078125i
-0.05273438-0.05273438i	0.05468750+0.05468750i	-0.05664063+0.05664063i
0.05859375-0.05859375i	-0.06054688-0.06054688i	0.06250000+0.06250000i
-0.06445313+0.06445313i	0.06640625-0.06640625i	-0.06835938-0.06835938i
0.07031250+0.07031250i	-0.07226563+0.07226563i	0.07421875-0.07421875i
-0.07617188-0.07617188i	0.07812500+0.07812500i	-0.08007813+0.08007813i
0.08203125-0.08203125i	-0.08398438-0.08398438i	0.08593750+0.08593750i
-0.08789063+0.08789063i	0.08984375-0.08984375i	-0.09179688-0.09179688i
0.09375000+0.09375000i	-0.09570313+0.09570313i	0.09765625-0.09765625i
-0.09960938-0.09960938i	0.10156250+0.10156250i	-0.10351563+0.10351563i
0.10546875-0.10546875i	-0.10742188-0.10742188i	0.10937500+0.10937500i
-0.11132813+0.11132813i	0.11328125-0.11328125i	-0.11523438-0.11523438i
0.11718750+0.11718750i	-0.11914063+0.11914063i	0.12109375-0.12109375i
-0.12304688-0.12304688i	0.12500000+0.12500000i	-0.12695313+0.12695313i
0.12890625-0.12890625i	-0.13085938-0.13085938i	0.13281250+0.13281250i
-0.13476563+0.13476563i	0.13671875-0.13671875i	-0.13867188-0.13867188i
0.14062500+0.14062500i	-0.14257813+0.14257813i	0.14453125-0.14453125i
-0.14648438-0.14648438i	0.14843750+0.14843750i	-0.15039063+0.15039063i
0.15234375-0.15234375i	-0.15429688-0.15429688i	0.15625000+0.15625000i
-0.15820313+0.15820313i	0.16015625-0.16015625i	-0.16210938-0.16210938i
0.16406250+0.16406250i	-0.16601563+0.16601563i	0.16796875-0.16796875i
-0.16992188-0.16992188i	0.17187500+0.17187500i	-0.17382813+0.17382813i
0.17578125-0.17578125i	-0.17773438-0.17773438i	0.17968750+0.17968750i
-0.18164063+0.18164063i	0.18359375-0.18359375i	-0.18554688-0.18554688i
0.18750000+0.18750000i	-0.18945313+0.18945313i	0.19140625-0.19140625i
-0.19335938-0.19335938i	0.19531250+0.19531250i	-0.19726563+0.19726563i
0.19921875-0.19921875i	-0.20117188-0.20117188i	0.20312500+0.20312500i
-0.20507813+0.20507813i	0.20703125-0.20703125i	-0.20898438-0.20898438i
0.21093750+0.21093750i	-0.21289063+0.21289063i	0.21484375-0.21484375i
-0.21679688-0.21679688i	0.21875000+0.21875000i	-0.22070313+0.22070313i
0.22265625-0.22265625i	-0.22460938-0.22460938i	0.22656250+0.22656250i
-0.22851563+0.22851563i	0.23046875-0.23046875i	-0.23242188-0.23242188i
0.23437500+0.23437500i	-0.23632813+0.23632813i	0.23828125-0.23828125i
-0.24023438-0.24023438i	0.24218750+0.24218750i	-0.24414063+0.24414063i
0.24609375-0.24609375i	-0.24804688-0.24804688i	0.25000000+0.25000000i
-0.25195313+0.25195313i	0.25390625-0.25390625i	-0.25585938-0.25585938i
0.25781250+0.25781250i	-0.25976563+0.25976563i	0.26171875-0.26171875i
-0.26367188-0.26367188i	0.26562500+0.26562500i	-0.26757813+0.26757813i
0.26953125-0.26953125i	-0.27148438-0.27148438i	0.27343750+0.27343750i
-0.27539063+0.27539063i	0.27734375-0.27734375i	-0.27929688-0.27929688i
0.28125000+0.28125000i	-0.28320313+0.28320313i	0.28515625-0.28515625i
-0.28710938-0.28710938i	0.28906250+0.28906250i	-0.29101563+0.29101563i
0.29296875-0.29296875i	-0.29492188-0.29492188i	0.29687500+0.29687500i
-0.29882813+0.29882813i	0.30078125-0.30078125i	-0.30273438-0.30273438i
0.30468750+0.30468750i	-0.30664063+0.30664063i	0.30859375-0.30859375i
-0.31054688-0.31054688i	0.31250000+0.31250000i	-0.31445313+0.31445313i
0.31640625-0.31640625i	-0.31835938-0.31835938i	0.32031250+0.32031250i

-0.32226563+0.32226563i	0.32421875-0.32421875i	-0.32617188-0.32617188i
0.32812500+0.32812500i	-0.33007813+0.33007813i	0.33203125-0.33203125i
-0.33398438-0.33398438i	0.33593750+0.33593750i	-0.33789063+0.33789063i
0.33984375-0.33984375i	-0.34179688-0.34179688i	0.34375000+0.34375000i
-0.34570313+0.34570313i	0.34765625-0.34765625i	-0.34960938-0.34960938i
0.35156250+0.35156250i	-0.35351563+0.35351563i	0.35546875-0.35546875i
-0.35742188-0.35742188i	0.35937500+0.35937500i	-0.36132813+0.36132813i
0.36328125-0.36328125i	-0.36523438-0.36523438i	0.36718750+0.36718750i
-0.36914063+0.36914063i	0.37109375-0.37109375i	-0.37304688-0.37304688i
0.37500000+0.37500000i	-0.37695313+0.37695313i	0.37890625-0.37890625i
-0.38085938-0.38085938i	0.38281250+0.38281250i	-0.38476563+0.38476563i
0.38671875-0.38671875i	-0.38867188-0.38867188i	0.39062500+0.39062500i
-0.39257813+0.39257813i	0.39453125-0.39453125i	-0.39648438-0.39648438i
0.39843750+0.39843750i	-0.40039063+0.40039063i	0.40234375-0.40234375i
-0.40429688-0.40429688i	0.40625000+0.40625000i	-0.40820313+0.40820313i
0.41015625-0.41015625i	-0.41210938-0.41210938i	0.41406250+0.41406250i
-0.41601563+0.41601563i	0.41796875-0.41796875i	-0.41992188-0.41992188i
0.42187500+0.42187500i	-0.42382813+0.42382813i	0.42578125-0.42578125i
-0.42773438-0.42773438i	0.42968750+0.42968750i	-0.43164063+0.43164063i
0.43359375-0.43359375i	-0.43554688-0.43554688i	0.43750000+0.43750000i
-0.43945313+0.43945313i	0.44140625-0.44140625i	-0.44335938-0.44335938i
0.44531250+0.44531250i	-0.44726563+0.44726563i	0.44921875-0.44921875i
-0.45117188-0.45117188i	0.45312500+0.45312500i	-0.45507813+0.45507813i
0.45703125-0.45703125i	-0.45898438-0.45898438i	0.46093750+0.46093750i
-0.46289063+0.46289063i	0.46484375-0.46484375i	-0.46679688-0.46679688i
0.46875000+0.46875000i	-0.47070313+0.47070313i	0.47265625-0.47265625i
-0.47460938-0.47460938i	0.47656250+0.47656250i	-0.47851563+0.47851563i
0.48046875-0.48046875i	-0.48242188-0.48242188i	0.48437500+0.48437500i
-0.48632813+0.48632813i	0.48828125-0.48828125i	-0.49023438-0.49023438i
0.49218750+0.49218750i	-0.49414063+0.49414063i	0.49609375-0.49609375i
-0.49804688-0.49804688i	0.50000000+0.50000000i	-0.50195313+0.50195313i
0.50390625-0.50390625i	-0.50585938-0.50585938i	0.50781250+0.50781250i
-0.50976563+0.50976563i	0.51171875-0.51171875i	-0.51367188-0.51367188i
0.51562500+0.51562500i	-0.51757813+0.51757813i	0.51953125-0.51953125i
-0.52148438-0.52148438i	0.52343750+0.52343750i	-0.52539063+0.52539063i
0.52734375-0.52734375i	-0.52929688-0.52929688i	0.53125000+0.53125000i
-0.53320313+0.53320313i	0.53515625-0.53515625i	-0.53710938-0.53710938i
0.53906250+0.53906250i	-0.54101563+0.54101563i	0.54296875-0.54296875i
-0.54492188-0.54492188i	0.54687500+0.54687500i	-0.54882813+0.54882813i
0.55078125-0.55078125i	-0.55273438-0.55273438i	0.55468750+0.55468750i
-0.55664063+0.55664063i	0.55859375-0.55859375i	-0.56054688-0.56054688i
0.56250000+0.56250000i	-0.56445313+0.56445313i	0.56640625-0.56640625i
-0.56835938-0.56835938i	0.57031250+0.57031250i	-0.57226563+0.57226563i
0.57421875-0.57421875i	-0.57617188-0.57617188i	0.57812500+0.57812500i
-0.58007813+0.58007813i	0.58203125-0.58203125i	-0.58398438-0.58398438i
0.58593750+0.58593750i	-0.58789063+0.58789063i	0.58984375-0.58984375i
-0.59179688-0.59179688i	0.59375000+0.59375000i	-0.59570313+0.59570313i
0.59765625-0.59765625i	-0.59960938-0.59960938i	0.60156250+0.60156250i
-0.60351563+0.60351563i	0.60546875-0.60546875i	-0.60742188-0.60742188i
0.60937500+0.60937500i	-0.61132813+0.61132813i	0.61328125-0.61328125i
-0.61523438-0.61523438i	0.61718750+0.61718750i	-0.61914063+0.61914063i
0.62109375-0.62109375i	-0.62304688-0.62304688i	0.62500000+0.62500000i
-0.62695313+0.62695313i	0.62890625-0.62890625i	-0.63085938-0.63085938i
0.63281250+0.63281250i	-0.63476563+0.63476563i	0.63671875-0.63671875i
-0.63867188-0.63867188i	0.64062500+0.64062500i	-0.64257813+0.64257813i
0.64453125-0.64453125i	-0.64648438-0.64648438i	0.64843750+0.64843750i
-0.65039063+0.65039063i	0.65234375-0.65234375i	-0.65429688-0.65429688i
0.65625000+0.65625000i	-0.65820313+0.65820313i	0.66015625-0.66015625i
-0.66210938-0.66210938i	0.66406250+0.66406250i	-0.66601563+0.66601563i
0.66796875-0.66796875i	-0.66992188-0.66992188i	0.67187500+0.67187500i

-0.67382813+0.67382813i	0.67578125-0.67578125i	-0.67773438-0.67773438i
0.67968750+0.67968750i	-0.68164063+0.68164063i	0.68359375-0.68359375i
-0.68554688-0.68554688i	0.68750000+0.68750000i	-0.68945313+0.68945313i
0.69140625-0.69140625i	-0.69335938-0.69335938i	0.69531250+0.69531250i
-0.69726563+0.69726563i	0.69921875-0.69921875i	-0.70117188-0.70117188i
0.70312500+0.70312500i	-0.70507813+0.70507813i	0.70703125-0.70703125i
-0.70898438-0.70898438i	0.71093750+0.71093750i	-0.71289063+0.71289063i
0.71484375-0.71484375i	-0.71679688-0.71679688i	0.71875000+0.71875000i
-0.72070313+0.72070313i	0.72265625-0.72265625i	-0.72460938-0.72460938i
0.72656250+0.72656250i	-0.72851563+0.72851563i	0.73046875-0.73046875i
-0.73242188-0.73242188i	0.73437500+0.73437500i	-0.73632813+0.73632813i
0.73828125-0.73828125i	-0.74023438-0.74023438i	0.74218750+0.74218750i
-0.74414063+0.74414063i	0.74609375-0.74609375i	-0.74804688-0.74804688i
0.75000000+0.75000000i	-0.75195313+0.75195313i	0.75390625-0.75390625i
-0.75585938-0.75585938i	0.75781250+0.75781250i	-0.75976563+0.75976563i
0.76171875-0.76171875i	-0.76367188-0.76367188i	0.76562500+0.76562500i
-0.76757813+0.76757813i	0.76953125-0.76953125i	-0.77148438-0.77148438i
0.77343750+0.77343750i	-0.77539063+0.77539063i	0.77734375-0.77734375i
-0.77929688-0.77929688i	0.78125000+0.78125000i	-0.78320313+0.78320313i
0.78515625-0.78515625i	-0.78710938-0.78710938i	0.78906250+0.78906250i
-0.79101563+0.79101563i	0.79296875-0.79296875i	-0.79492188-0.79492188i
0.79687500+0.79687500i	-0.79882813+0.79882813i	0.80078125-0.80078125i
-0.80273438-0.80273438i	0.80468750+0.80468750i	-0.80664063+0.80664063i
0.80859375-0.80859375i	-0.81054688-0.81054688i	0.81250000+0.81250000i
-0.81445313+0.81445313i	0.81640625-0.81640625i	-0.81835938-0.81835938i
0.82031250+0.82031250i	-0.82226563+0.82226563i	0.82421875-0.82421875i
-0.82617188-0.82617188i	0.82812500+0.82812500i	-0.83007813+0.83007813i
0.83203125-0.83203125i	-0.83398438-0.83398438i	0.83593750+0.83593750i
-0.83789063+0.83789063i	0.83984375-0.83984375i	-0.84179688-0.84179688i
0.84375000+0.84375000i	-0.84570313+0.84570313i	0.84765625-0.84765625i
-0.84960938-0.84960938i	0.85156250+0.85156250i	-0.85351563+0.85351563i
0.85546875-0.85546875i	-0.85742188-0.85742188i	0.85937500+0.85937500i
-0.86132813+0.86132813i	0.86328125-0.86328125i	-0.86523438-0.86523438i
0.86718750+0.86718750i	-0.86914063+0.86914063i	0.87109375-0.87109375i
-0.87304688-0.87304688i	0.87500000+0.87500000i	-0.87695313+0.87695313i
0.87890625-0.87890625i	-0.88085938-0.88085938i	0.88281250+0.88281250i
-0.88476563+0.88476563i	0.88671875-0.88671875i	-0.88867188-0.88867188i
0.89062500+0.89062500i	-0.89257813+0.89257813i	0.89453125-0.89453125i
-0.89648438-0.89648438i	0.89843750+0.89843750i	-0.90039063+0.90039063i
0.90234375-0.90234375i	-0.90429688-0.90429688i	0.90625000+0.90625000i
-0.90820313+0.90820313i	0.91015625-0.91015625i	-0.91210938-0.91210938i
0.91406250+0.91406250i	-0.91601563+0.91601563i	0.91796875-0.91796875i
-0.91992188-0.91992188i	0.92187500+0.92187500i	-0.92382813+0.92382813i
0.92578125-0.92578125i	-0.92773438-0.92773438i	0.92968750+0.92968750i
-0.93164063+0.93164063i	0.93359375-0.93359375i	-0.93554688-0.93554688i
0.93750000+0.93750000i	-0.93945313+0.93945313i	0.94140625-0.94140625i
-0.94335938-0.94335938i	0.94531250+0.94531250i	-0.94726563+0.94726563i
0.94921875-0.94921875i	-0.95117188-0.95117188i	0.95312500+0.95312500i
-0.95507813+0.95507813i	0.95703125-0.95703125i	-0.95898438-0.95898438i
0.96093750+0.96093750i	-0.96289063+0.96289063i	0.96484375-0.96484375i
-0.96679688-0.96679688i	0.96875000+0.96875000i	-0.97070313+0.97070313i
0.97265625-0.97265625i	-0.97460938-0.97460938i	0.97656250+0.97656250i
-0.97851563+0.97851563i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	

Frame Number = 2

0.00000000+0.00000000i	-0.00195313+0.00195313i	0.00390625-0.00390625i
-0.00585938-0.00585938i	0.00781250+0.00781250i	-0.00976563+0.00976563i

0.01171875−0.01171875i	−0.01367188−0.01367188i	0.01562500+0.01562500i
−0.01757813+0.01757813i	0.01953125−0.01953125i	−0.02148438−0.02148438i
0.02343750+0.02343750i	−0.02539063+0.02539063i	0.02734375−0.02734375i
−0.02929688−0.02929688i	0.03125000+0.03125000i	−0.03320313+0.03320313i
0.03515625−0.03515625i	−0.03710938−0.03710938i	0.03906250+0.03906250i
−0.04101563+0.04101563i	0.04296875−0.04296875i	−0.04492188−0.04492188i
0.04687500+0.04687500i	−0.04882813+0.04882813i	0.05078125−0.05078125i
−0.05273438−0.05273438i	0.05468750+0.05468750i	−0.05664063+0.05664063i
0.05859375−0.05859375i	−0.06054688−0.06054688i	0.06250000+0.06250000i
−0.06445313+0.06445313i	0.06640625−0.06640625i	−0.06835938−0.06835938i
0.07031250+0.07031250i	−0.07226563+0.07226563i	0.07421875−0.07421875i
−0.07617188−0.07617188i	0.07812500+0.07812500i	−0.08007813+0.08007813i
0.08203125−0.08203125i	−0.08398438−0.08398438i	0.08593750+0.08593750i
−0.08789063+0.08789063i	0.08984375−0.08984375i	−0.09179688−0.09179688i
0.09375000+0.09375000i	−0.09570313+0.09570313i	0.09765625−0.09765625i
−0.09960938−0.09960938i	0.10156250+0.10156250i	−0.10351563+0.10351563i
0.10546875−0.10546875i	−0.10742188−0.10742188i	0.10937500+0.10937500i
−0.11132813+0.11132813i	0.11328125−0.11328125i	−0.11523438−0.11523438i
0.11718750+0.11718750i	−0.11914063+0.11914063i	0.12109375−0.12109375i
−0.12304688−0.12304688i	0.12500000+0.12500000i	−0.12695313+0.12695313i
0.12890625−0.12890625i	−0.13085938−0.13085938i	0.13281250+0.13281250i
−0.13476563+0.13476563i	0.13671875−0.13671875i	−0.13867188−0.13867188i
0.14062500+0.14062500i	−0.14257813+0.14257813i	0.14453125−0.14453125i
−0.14648438−0.14648438i	0.14843750+0.14843750i	−0.15039063+0.15039063i
0.15234375−0.15234375i	−0.15429688−0.15429688i	0.15625000+0.15625000i
−0.15820313+0.15820313i	0.16015625−0.16015625i	−0.16210938−0.16210938i
0.16406250+0.16406250i	−0.16601563+0.16601563i	0.16796875−0.16796875i
−0.16992188−0.16992188i	0.17187500+0.17187500i	−0.17382813+0.17382813i
0.17578125−0.17578125i	−0.17773438−0.17773438i	0.17968750+0.17968750i
−0.18164063+0.18164063i	0.18359375−0.18359375i	−0.18554688−0.18554688i
0.18750000+0.18750000i	−0.18945313+0.18945313i	0.19140625−0.19140625i
−0.19335938−0.19335938i	0.19531250+0.19531250i	−0.19726563+0.19726563i
0.19921875−0.19921875i	−0.20117188−0.20117188i	0.20312500+0.20312500i
−0.20507813+0.20507813i	0.20703125−0.20703125i	−0.20898438−0.20898438i
0.21093750+0.21093750i	−0.21289063+0.21289063i	0.21484375−0.21484375i
−0.21679688−0.21679688i	0.21875000+0.21875000i	−0.22070313+0.22070313i
0.22265625−0.22265625i	−0.22460938−0.22460938i	0.22656250+0.22656250i
−0.22851563+0.22851563i	0.23046875−0.23046875i	−0.23242188−0.23242188i
0.23437500+0.23437500i	−0.23632813+0.23632813i	0.23828125−0.23828125i
−0.24023438−0.24023438i	0.24218750+0.24218750i	−0.24414063+0.24414063i
0.24609375−0.24609375i	−0.24804688−0.24804688i	0.25000000+0.25000000i
−0.25195313+0.25195313i	0.25390625−0.25390625i	−0.25585938−0.25585938i
0.25781250+0.25781250i	−0.25976563+0.25976563i	0.26171875−0.26171875i
−0.26367188−0.26367188i	0.26562500+0.26562500i	−0.26757813+0.26757813i
0.26953125−0.26953125i	−0.27148438−0.27148438i	0.27343750+0.27343750i
−0.27539063+0.27539063i	0.27734375−0.27734375i	−0.27929688−0.27929688i
0.28125000+0.28125000i	−0.28320313+0.28320313i	0.28515625−0.28515625i
−0.28710938−0.28710938i	0.28906250+0.28906250i	−0.29101563+0.29101563i
0.29296875−0.29296875i	−0.29492188−0.29492188i	0.29687500+0.29687500i
−0.29882813+0.29882813i	0.30078125−0.30078125i	−0.30273438−0.30273438i
0.30468750+0.30468750i	−0.30664063+0.30664063i	0.30859375−0.30859375i
−0.31054688−0.31054688i	0.31250000+0.31250000i	−0.31445313+0.31445313i
0.31640625−0.31640625i	−0.31835938−0.31835938i	0.32031250+0.32031250i
−0.32226563+0.32226563i	0.32421875−0.32421875i	−0.32617188−0.32617188i
0.32812500+0.32812500i	−0.33007813+0.33007813i	0.33203125−0.33203125i
−0.33398438−0.33398438i	0.33593750+0.33593750i	−0.33789063+0.33789063i
0.33984375−0.33984375i	−0.34179688−0.34179688i	0.34375000+0.34375000i
−0.34570313+0.34570313i	0.34765625−0.34765625i	−0.34960938−0.34960938i
0.35156250+0.35156250i	−0.35351563+0.35351563i	0.35546875−0.35546875i
−0.35742188−0.35742188i	0.35937500+0.35937500i	−0.36132813+0.36132813i

0.36328125-0.36328125i	-0.36523438-0.36523438i	0.36718750+0.36718750i
-0.36914063+0.36914063i	0.37109375-0.37109375i	-0.37304688-0.37304688i
0.37500000+0.37500000i	-0.37695313+0.37695313i	0.37890625-0.37890625i
-0.38085938-0.38085938i	0.38281250+0.38281250i	-0.38476563+0.38476563i
0.38671875-0.38671875i	-0.38867188-0.38867188i	0.39062500+0.39062500i
-0.39257813+0.39257813i	0.39453125-0.39453125i	-0.39648438-0.39648438i
0.39843750+0.39843750i	-0.40039063+0.40039063i	0.40234375-0.40234375i
-0.40429688-0.40429688i	0.40625000+0.40625000i	-0.40820313+0.40820313i
0.41015625-0.41015625i	-0.41210938-0.41210938i	0.41406250+0.41406250i
-0.41601563+0.41601563i	0.41796875-0.41796875i	-0.41992188-0.41992188i
0.42187500+0.42187500i	-0.42382813+0.42382813i	0.42578125-0.42578125i
-0.42773438-0.42773438i	0.42968750+0.42968750i	-0.43164063+0.43164063i
0.43359375-0.43359375i	-0.43554688-0.43554688i	0.43750000+0.43750000i
-0.43945313+0.43945313i	0.44140625-0.44140625i	-0.44335938-0.44335938i
0.44531250+0.44531250i	-0.44726563+0.44726563i	0.44921875-0.44921875i
-0.45117188-0.45117188i	0.45312500+0.45312500i	-0.45507813+0.45507813i
0.45703125-0.45703125i	-0.45898438-0.45898438i	0.46093750+0.46093750i
-0.46289063+0.46289063i	0.46484375-0.46484375i	-0.46679688-0.46679688i
0.46875000+0.46875000i	-0.47070313+0.47070313i	0.47265625-0.47265625i
-0.47460938-0.47460938i	0.47656250+0.47656250i	-0.47851563+0.47851563i
0.48046875-0.48046875i	-0.48242188-0.48242188i	0.48437500+0.48437500i
-0.48632813+0.48632813i	0.48828125-0.48828125i	-0.49023438-0.49023438i
0.49218750+0.49218750i	-0.49414063+0.49414063i	0.49609375-0.49609375i
-0.49804688-0.49804688i	0.50000000+0.50000000i	-0.50195313+0.50195313i
0.50390625-0.50390625i	-0.50585938-0.50585938i	0.50781250+0.50781250i
-0.50976563+0.50976563i	0.51171875-0.51171875i	-0.51367188-0.51367188i
0.51562500+0.51562500i	-0.51757813+0.51757813i	0.51953125-0.51953125i
-0.52148438-0.52148438i	0.52343750+0.52343750i	-0.52539063+0.52539063i
0.52734375-0.52734375i	-0.52929688-0.52929688i	0.53125000+0.53125000i
-0.53320313+0.53320313i	0.53515625-0.53515625i	-0.53710938-0.53710938i
0.53906250+0.53906250i	-0.54101563+0.54101563i	0.54296875-0.54296875i
-0.54492188-0.54492188i	0.54687500+0.54687500i	-0.54882813+0.54882813i
0.55078125-0.55078125i	-0.55273438-0.55273438i	0.55468750+0.55468750i
-0.55664063+0.55664063i	0.55859375-0.55859375i	-0.56054688-0.56054688i
0.56250000+0.56250000i	-0.56445313+0.56445313i	0.56640625-0.56640625i
-0.56835938-0.56835938i	0.57031250+0.57031250i	-0.57226563+0.57226563i
0.57421875-0.57421875i	-0.57617188-0.57617188i	0.57812500+0.57812500i
-0.58007813+0.58007813i	0.58203125-0.58203125i	-0.58398438-0.58398438i
0.58593750+0.58593750i	-0.58789063+0.58789063i	0.58984375-0.58984375i
-0.59179688-0.59179688i	0.59375000+0.59375000i	-0.59570313+0.59570313i
0.59765625-0.59765625i	-0.59960938-0.59960938i	0.60156250+0.60156250i
-0.60351563+0.60351563i	0.60546875-0.60546875i	-0.60742188-0.60742188i
0.60937500+0.60937500i	-0.61132813+0.61132813i	0.61328125-0.61328125i
-0.61523438-0.61523438i	0.61718750+0.61718750i	-0.61914063+0.61914063i
0.62109375-0.62109375i	-0.62304688-0.62304688i	0.62500000+0.62500000i
-0.62695313+0.62695313i	0.62890625-0.62890625i	-0.63085938-0.63085938i
0.63281250+0.63281250i	-0.63476563+0.63476563i	0.63671875-0.63671875i
-0.63867188-0.63867188i	0.64062500+0.64062500i	-0.64257813+0.64257813i
0.64453125-0.64453125i	-0.64648438-0.64648438i	0.64843750+0.64843750i
-0.65039063+0.65039063i	0.65234375-0.65234375i	-0.65429688-0.65429688i
0.65625000+0.65625000i	-0.65820313+0.65820313i	0.66015625-0.66015625i
-0.66210938-0.66210938i	0.66406250+0.66406250i	-0.66601563+0.66601563i
0.66796875-0.66796875i	-0.66992188-0.66992188i	0.67187500+0.67187500i
-0.67382813+0.67382813i	0.67578125-0.67578125i	-0.67773438-0.67773438i
0.67968750+0.67968750i	-0.68164063+0.68164063i	0.68359375-0.68359375i
-0.68554688-0.68554688i	0.68750000+0.68750000i	-0.68945313+0.68945313i
0.69140625-0.69140625i	-0.69335938-0.69335938i	0.69531250+0.69531250i
-0.69726563+0.69726563i	0.69921875-0.69921875i	-0.70117188-0.70117188i
0.70312500+0.70312500i	-0.70507813+0.70507813i	0.70703125-0.70703125i
-0.70898438-0.70898438i	0.71093750+0.71093750i	-0.71289063+0.71289063i

0.71484375−0.71484375i	−0.71679688−0.71679688i	0.71875000+0.71875000i
−0.72070313+0.72070313i	0.72265625−0.72265625i	−0.72460938−0.72460938i
0.72656250+0.72656250i	−0.72851563+0.72851563i	0.73046875−0.73046875i
−0.73242188−0.73242188i	0.73437500+0.73437500i	−0.73632813+0.73632813i
0.73828125−0.73828125i	−0.74023438−0.74023438i	0.74218750+0.74218750i
−0.74414063+0.74414063i	0.74609375−0.74609375i	−0.74804688−0.74804688i
0.75000000+0.75000000i	−0.75195313+0.75195313i	0.75390625−0.75390625i
−0.75585938−0.75585938i	0.75781250+0.75781250i	−0.75976563+0.75976563i
0.76171875−0.76171875i	−0.76367188−0.76367188i	0.76562500+0.76562500i
−0.76757813+0.76757813i	0.76953125−0.76953125i	−0.77148438−0.77148438i
0.77343750+0.77343750i	−0.77539063+0.77539063i	0.77734375−0.77734375i
−0.77929688−0.77929688i	0.78125000+0.78125000i	−0.78320313+0.78320313i
0.78515625−0.78515625i	−0.78710938−0.78710938i	0.78906250+0.78906250i
−0.79101563+0.79101563i	0.79296875−0.79296875i	−0.79492188−0.79492188i
0.79687500+0.79687500i	−0.79882813+0.79882813i	0.80078125−0.80078125i
−0.80273438−0.80273438i	0.80468750+0.80468750i	−0.80664063+0.80664063i
0.80859375−0.80859375i	−0.81054688−0.81054688i	0.81250000+0.81250000i
−0.81445313+0.81445313i	0.81640625−0.81640625i	−0.81835938−0.81835938i
0.82031250+0.82031250i	−0.82226563+0.82226563i	0.82421875−0.82421875i
−0.82617188−0.82617188i	0.82812500+0.82812500i	−0.83007813+0.83007813i
0.83203125−0.83203125i	−0.83398438−0.83398438i	0.83593750+0.83593750i
−0.83789063+0.83789063i	0.83984375−0.83984375i	−0.84179688−0.84179688i
0.84375000+0.84375000i	−0.84570313+0.84570313i	0.84765625−0.84765625i
−0.84960938−0.84960938i	0.85156250+0.85156250i	−0.85351563+0.85351563i
0.85546875−0.85546875i	−0.85742188−0.85742188i	0.85937500+0.85937500i
−0.86132813+0.86132813i	0.86328125−0.86328125i	−0.86523438−0.86523438i
0.86718750+0.86718750i	−0.86914063+0.86914063i	0.87109375−0.87109375i
−0.87304688−0.87304688i	0.87500000+0.87500000i	−0.87695313+0.87695313i
0.87890625−0.87890625i	−0.88085938−0.88085938i	0.88281250+0.88281250i
−0.88476563+0.88476563i	0.88671875−0.88671875i	−0.88867188−0.88867188i
0.89062500+0.89062500i	−0.89257813+0.89257813i	0.89453125−0.89453125i
−0.89648438−0.89648438i	0.89843750+0.89843750i	−0.90039063+0.90039063i
0.90234375−0.90234375i	−0.90429688−0.90429688i	0.90625000+0.90625000i
−0.90820313+0.90820313i	0.91015625−0.91015625i	−0.91210938−0.91210938i
0.91406250+0.91406250i	−0.91601563+0.91601563i	0.91796875−0.91796875i
−0.91992188−0.91992188i	0.92187500+0.92187500i	−0.92382813+0.92382813i
0.92578125−0.92578125i	−0.92773438−0.92773438i	0.92968750+0.92968750i
−0.93164063+0.93164063i	0.93359375−0.93359375i	−0.93554688−0.93554688i
0.93750000+0.93750000i	−0.93945313+0.93945313i	0.94140625−0.94140625i
−0.94335938−0.94335938i	0.94531250+0.94531250i	−0.94726563+0.94726563i
0.94921875−0.94921875i	−0.95117188−0.95117188i	0.95312500+0.95312500i
−0.95507813+0.95507813i	0.95703125−0.95703125i	−0.95898438−0.95898438i
0.96093750+0.96093750i	−0.96289063+0.96289063i	0.96484375−0.96484375i
−0.96679688−0.96679688i	0.96875000+0.96875000i	−0.97070313+0.97070313i
0.97265625−0.97265625i	−0.97460938−0.97460938i	0.97656250+0.97656250i
−0.97851563+0.97851563i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	

Frame Number = 3

0.00000000+0.00000000i	−0.00195313+0.00195313i	0.00390625−0.00390625i
−0.00585938−0.00585938i	0.00781250+0.00781250i	−0.00976563+0.00976563i
0.01171875−0.01171875i	−0.01367188−0.01367188i	0.01562500+0.01562500i
−0.01757813+0.01757813i	0.01953125−0.01953125i	−0.02148438−0.02148438i
0.02343750+0.02343750i	−0.02539063+0.02539063i	0.02734375−0.02734375i
−0.02929688−0.02929688i	0.03125000+0.03125000i	−0.03320313+0.03320313i
0.03515625−0.03515625i	−0.03710938−0.03710938i	0.03906250+0.03906250i
−0.04101563+0.04101563i	0.04296875−0.04296875i	−0.04492188−0.04492188i
0.04687500+0.04687500i	−0.04882813+0.04882813i	0.05078125−0.05078125i

−0.05273438−0.05273438i	0.05468750+0.05468750i	−0.05664063+0.05664063i
0.05859375−0.05859375i	−0.06054688−0.06054688i	0.06250000+0.06250000i
−0.06445313+0.06445313i	0.06640625−0.06640625i	−0.06835938−0.06835938i
0.07031250+0.07031250i	−0.07226563+0.07226563i	0.07421875−0.07421875i
−0.07617188−0.07617188i	0.07812500+0.07812500i	−0.08007813+0.08007813i
0.08203125−0.08203125i	−0.08398438−0.08398438i	0.08593750+0.08593750i
−0.08789063+0.08789063i	0.08984375−0.08984375i	−0.09179688−0.09179688i
0.09375000+0.09375000i	−0.09570313+0.09570313i	0.09765625−0.09765625i
−0.09960938−0.09960938i	0.10156250+0.10156250i	−0.10351563+0.10351563i
0.10546875−0.10546875i	−0.10742188−0.10742188i	0.10937500+0.10937500i
−0.11132813+0.11132813i	0.11328125−0.11328125i	−0.11523438−0.11523438i
0.11718750+0.11718750i	−0.11914063+0.11914063i	0.12109375−0.12109375i
−0.12304688−0.12304688i	0.12500000+0.12500000i	−0.12695313+0.12695313i
0.12890625−0.12890625i	−0.13085938−0.13085938i	0.13281250+0.13281250i
−0.13476563+0.13476563i	0.13671875−0.13671875i	−0.13867188−0.13867188i
0.14062500+0.14062500i	−0.14257813+0.14257813i	0.14453125−0.14453125i
−0.14648438−0.14648438i	0.14843750+0.14843750i	−0.15039063+0.15039063i
0.15234375−0.15234375i	−0.15429688−0.15429688i	0.15625000+0.15625000i
−0.15820313+0.15820313i	0.16015625−0.16015625i	−0.16210938−0.16210938i
0.16406250+0.16406250i	−0.16601563+0.16601563i	0.16796875−0.16796875i
−0.16992188−0.16992188i	0.17187500+0.17187500i	−0.17382813+0.17382813i
0.17578125−0.17578125i	−0.17773438−0.17773438i	0.17968750+0.17968750i
−0.18164063+0.18164063i	0.18359375−0.18359375i	−0.18554688−0.18554688i
0.18750000+0.18750000i	−0.18945313+0.18945313i	0.19140625−0.19140625i
−0.19335938−0.19335938i	0.19531250+0.19531250i	−0.19726563+0.19726563i
0.19921875−0.19921875i	−0.20117188−0.20117188i	0.20312500+0.20312500i
−0.20507813+0.20507813i	0.20703125−0.20703125i	−0.20898438−0.20898438i
0.21093750+0.21093750i	−0.21289063+0.21289063i	0.21484375−0.21484375i
−0.21679688−0.21679688i	0.21875000+0.21875000i	−0.22070313+0.22070313i
0.22265625−0.22265625i	−0.22460938−0.22460938i	0.22656250+0.22656250i
−0.22851563+0.22851563i	0.23046875−0.23046875i	−0.23242188−0.23242188i
0.23437500+0.23437500i	−0.23632813+0.23632813i	0.23828125−0.23828125i
−0.24023438−0.24023438i	0.24218750+0.24218750i	−0.24414063+0.24414063i
0.24609375−0.24609375i	−0.24804688−0.24804688i	0.25000000+0.25000000i
−0.25195313+0.25195313i	0.25390625−0.25390625i	−0.25585938−0.25585938i
0.25781250+0.25781250i	−0.25976563+0.25976563i	0.26171875−0.26171875i
−0.26367188−0.26367188i	0.26562500+0.26562500i	−0.26757813+0.26757813i
0.26953125−0.26953125i	−0.27148438−0.27148438i	0.27343750+0.27343750i
−0.27539063+0.27539063i	0.27734375−0.27734375i	−0.27929688−0.27929688i
0.28125000+0.28125000i	−0.28320313+0.28320313i	0.28515625−0.28515625i
−0.28710938−0.28710938i	0.28906250+0.28906250i	−0.29101563+0.29101563i
0.29296875−0.29296875i	−0.29492188−0.29492188i	0.29687500+0.29687500i
−0.29882813+0.29882813i	0.30078125−0.30078125i	−0.30273438−0.30273438i
0.30468750+0.30468750i	−0.30664063+0.30664063i	0.30859375−0.30859375i
−0.31054688−0.31054688i	0.31250000+0.31250000i	−0.31445313+0.31445313i
0.31640625−0.31640625i	−0.31835938−0.31835938i	0.32031250+0.32031250i
−0.32226563+0.32226563i	0.32421875−0.32421875i	−0.32617188−0.32617188i
0.32812500+0.32812500i	−0.33007813+0.33007813i	0.33203125−0.33203125i
−0.33398438−0.33398438i	0.33593750+0.33593750i	−0.33789063+0.33789063i
0.33984375−0.33984375i	−0.34179688−0.34179688i	0.34375000+0.34375000i
−0.34570313+0.34570313i	0.34765625−0.34765625i	−0.34960938−0.34960938i
0.35156250+0.35156250i	−0.35351563+0.35351563i	0.35546875−0.35546875i
−0.35742188−0.35742188i	0.35937500+0.35937500i	−0.36132813+0.36132813i
0.36328125−0.36328125i	−0.36523438−0.36523438i	0.36718750+0.36718750i
−0.36914063+0.36914063i	0.37109375−0.37109375i	−0.37304688−0.37304688i
0.37500000+0.37500000i	−0.37695313+0.37695313i	0.37890625−0.37890625i
−0.38085938−0.38085938i	0.38281250+0.38281250i	−0.38476563+0.38476563i
0.38671875−0.38671875i	−0.38867188−0.38867188i	0.39062500+0.39062500i
−0.39257813+0.39257813i	0.39453125−0.39453125i	−0.39648438−0.39648438i
0.39843750+0.39843750i	−0.40039063+0.40039063i	0.40234375−0.40234375i

-0.40429688-0.40429688i	0.40625000+0.40625000i	-0.40820313+0.40820313i
0.41015625-0.41015625i	-0.41210938-0.41210938i	0.41406250+0.41406250i
-0.41601563+0.41601563i	0.41796875-0.41796875i	-0.41992188-0.41992188i
0.42187500+0.42187500i	-0.42382813+0.42382813i	0.42578125-0.42578125i
-0.42773438-0.42773438i	0.42968750+0.42968750i	-0.43164063+0.43164063i
0.43359375-0.43359375i	-0.43554688-0.43554688i	0.43750000+0.43750000i
-0.43945313+0.43945313i	0.44140625-0.44140625i	-0.44335938-0.44335938i
0.44531250+0.44531250i	-0.44726563+0.44726563i	0.44921875-0.44921875i
-0.45117188-0.45117188i	0.45312500+0.45312500i	-0.45507813+0.45507813i
0.45703125-0.45703125i	-0.45898438-0.45898438i	0.46093750+0.46093750i
-0.46289063+0.46289063i	0.46484375-0.46484375i	-0.46679688-0.46679688i
0.46875000+0.46875000i	-0.47070313+0.47070313i	0.47265625-0.47265625i
-0.47460938-0.47460938i	0.47656250+0.47656250i	-0.47851563+0.47851563i
0.48046875-0.48046875i	-0.48242188-0.48242188i	0.48437500+0.48437500i
-0.48632813+0.48632813i	0.48828125-0.48828125i	-0.49023438-0.49023438i
0.49218750+0.49218750i	-0.49414063+0.49414063i	0.49609375-0.49609375i
-0.49804688-0.49804688i	0.50000000+0.50000000i	-0.50195313+0.50195313i
0.50390625-0.50390625i	-0.50585938-0.50585938i	0.50781250+0.50781250i
-0.50976563+0.50976563i	0.51171875-0.51171875i	-0.51367188-0.51367188i
0.51562500+0.51562500i	-0.51757813+0.51757813i	0.51953125-0.51953125i
-0.52148438-0.52148438i	0.52343750+0.52343750i	-0.52539063+0.52539063i
0.52734375-0.52734375i	-0.52929688-0.52929688i	0.53125000+0.53125000i
-0.53320313+0.53320313i	0.53515625-0.53515625i	-0.53710938-0.53710938i
0.53906250+0.53906250i	-0.54101563+0.54101563i	0.54296875-0.54296875i
-0.54492188-0.54492188i	0.54687500+0.54687500i	-0.54882813+0.54882813i
0.55078125-0.55078125i	-0.55273438-0.55273438i	0.55468750+0.55468750i
-0.55664063+0.55664063i	0.55859375-0.55859375i	-0.56054688-0.56054688i
0.56250000+0.56250000i	-0.56445313+0.56445313i	0.56640625-0.56640625i
-0.56835938-0.56835938i	0.57031250+0.57031250i	-0.57226563+0.57226563i
0.57421875-0.57421875i	-0.57617188-0.57617188i	0.57812500+0.57812500i
-0.58007813+0.58007813i	0.58203125-0.58203125i	-0.58398438-0.58398438i
0.58593750+0.58593750i	-0.58789063+0.58789063i	0.58984375-0.58984375i
-0.59179688-0.59179688i	0.59375000+0.59375000i	-0.59570313+0.59570313i
0.59765625-0.59765625i	-0.59960938-0.59960938i	0.60156250+0.60156250i
-0.60351563+0.60351563i	0.60546875-0.60546875i	-0.60742188-0.60742188i
0.60937500+0.60937500i	-0.61132813+0.61132813i	0.61328125-0.61328125i
-0.61523438-0.61523438i	0.61718750+0.61718750i	-0.61914063+0.61914063i
0.62109375-0.62109375i	-0.62304688-0.62304688i	0.62500000+0.62500000i
-0.62695313+0.62695313i	0.62890625-0.62890625i	-0.63085938-0.63085938i
0.63281250+0.63281250i	-0.63476563+0.63476563i	0.63671875-0.63671875i
-0.63867188-0.63867188i	0.64062500+0.64062500i	-0.64257813+0.64257813i
0.64453125-0.64453125i	-0.64648438-0.64648438i	0.64843750+0.64843750i
-0.65039063+0.65039063i	0.65234375-0.65234375i	-0.65429688-0.65429688i
0.65625000+0.65625000i	-0.65820313+0.65820313i	0.66015625-0.66015625i
-0.66210938-0.66210938i	0.66406250+0.66406250i	-0.66601563+0.66601563i
0.66796875-0.66796875i	-0.66992188-0.66992188i	0.67187500+0.67187500i
-0.67382813+0.67382813i	0.67578125-0.67578125i	-0.67773438-0.67773438i
0.67968750+0.67968750i	-0.68164063+0.68164063i	0.68359375-0.68359375i
-0.68554688-0.68554688i	0.68750000+0.68750000i	-0.68945313+0.68945313i
0.69140625-0.69140625i	-0.69335938-0.69335938i	0.69531250+0.69531250i
-0.69726563+0.69726563i	0.69921875-0.69921875i	-0.70117188-0.70117188i
0.70312500+0.70312500i	-0.70507813+0.70507813i	0.70703125-0.70703125i
-0.70898438-0.70898438i	0.71093750+0.71093750i	-0.71289063+0.71289063i
0.71484375-0.71484375i	-0.71679688-0.71679688i	0.71875000+0.71875000i
-0.72070313+0.72070313i	0.72265625-0.72265625i	-0.72460938-0.72460938i
0.72656250+0.72656250i	-0.72851563+0.72851563i	0.73046875-0.73046875i
-0.73242188-0.73242188i	0.73437500+0.73437500i	-0.73632813+0.73632813i
0.73828125-0.73828125i	-0.74023438-0.74023438i	0.74218750+0.74218750i
-0.74414063+0.74414063i	0.74609375-0.74609375i	-0.74804688-0.74804688i
0.75000000+0.75000000i	-0.75195313+0.75195313i	0.75390625-0.75390625i

-0.75585938-0.75585938i	0.75781250+0.75781250i	-0.75976563+0.75976563i
0.76171875-0.76171875i	-0.76367188-0.76367188i	0.76562500+0.76562500i
-0.76757813+0.76757813i	0.76953125-0.76953125i	-0.77148438-0.77148438i
0.77343750+0.77343750i	-0.77539063+0.77539063i	0.77734375-0.77734375i
-0.77929688-0.77929688i	0.78125000+0.78125000i	-0.78320313+0.78320313i
0.78515625-0.78515625i	-0.78710938-0.78710938i	0.78906250+0.78906250i
-0.79101563+0.79101563i	0.79296875-0.79296875i	-0.79492188-0.79492188i
0.79687500+0.79687500i	-0.79882813+0.79882813i	0.80078125-0.80078125i
-0.80273438-0.80273438i	0.80468750+0.80468750i	-0.80664063+0.80664063i
0.80859375-0.80859375i	-0.81054688-0.81054688i	0.81250000+0.81250000i
-0.81445313+0.81445313i	0.81640625-0.81640625i	-0.81835938-0.81835938i
0.82031250+0.82031250i	-0.82226563+0.82226563i	0.82421875-0.82421875i
-0.82617188-0.82617188i	0.82812500+0.82812500i	-0.83007813+0.83007813i
0.83203125-0.83203125i	-0.83398438-0.83398438i	0.83593750+0.83593750i
-0.83789063+0.83789063i	0.83984375-0.83984375i	-0.84179688-0.84179688i
0.84375000+0.84375000i	-0.84570313+0.84570313i	0.84765625-0.84765625i
-0.84960938-0.84960938i	0.85156250+0.85156250i	-0.85351563+0.85351563i
0.85546875-0.85546875i	-0.85742188-0.85742188i	0.85937500+0.85937500i
-0.86132813+0.86132813i	0.86328125-0.86328125i	-0.86523438-0.86523438i
0.86718750+0.86718750i	-0.86914063+0.86914063i	0.87109375-0.87109375i
-0.87304688-0.87304688i	0.87500000+0.87500000i	-0.87695313+0.87695313i
0.87890625-0.87890625i	-0.88085938-0.88085938i	0.88281250+0.88281250i
-0.88476563+0.88476563i	0.88671875-0.88671875i	-0.88867188-0.88867188i
0.89062500+0.89062500i	-0.89257813+0.89257813i	0.89453125-0.89453125i
-0.89648438-0.89648438i	0.89843750+0.89843750i	-0.90039063+0.90039063i
0.90234375-0.90234375i	-0.90429688-0.90429688i	0.90625000+0.90625000i
-0.90820313+0.90820313i	0.91015625-0.91015625i	-0.91210938-0.91210938i
0.91406250+0.91406250i	-0.91601563+0.91601563i	0.91796875-0.91796875i
-0.91992188-0.91992188i	0.92187500+0.92187500i	-0.92382813+0.92382813i
0.92578125-0.92578125i	-0.92773438-0.92773438i	0.92968750+0.92968750i
-0.93164063+0.93164063i	0.93359375-0.93359375i	-0.93554688-0.93554688i
0.93750000+0.93750000i	-0.93945313+0.93945313i	0.94140625-0.94140625i
-0.94335938-0.94335938i	0.94531250+0.94531250i	-0.94726563+0.94726563i
0.94921875-0.94921875i	-0.95117188-0.95117188i	0.95312500+0.95312500i
-0.95507813+0.95507813i	0.95703125-0.95703125i	-0.95898438-0.95898438i
0.96093750+0.96093750i	-0.96289063+0.96289063i	0.96484375-0.96484375i
-0.96679688-0.96679688i	0.96875000+0.96875000i	-0.97070313+0.97070313i
0.97265625-0.97265625i	-0.97460938-0.97460938i	0.97656250+0.97656250i
-0.97851563+0.97851563i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	

The encrypted fine stream generated at transmitter T1 for receiver R2 is provided below.

Frame Number = 1
fineInputCtr = 0

-0.26562500-0.26562500i	0.26757813-0.26757813i	-0.26953125+0.26953125i
0.27148438+0.27148438i	0.27343750+0.27343750i	-0.27539063+0.27539063i
-0.27734375+0.27734375i	0.27929688+0.27929688i	0.25000000+0.25000000i
0.25195313-0.25195313i	-0.25390625+0.25390625i	0.25585938+0.25585938i
-0.25781250-0.25781250i	-0.25976563+0.25976563i	0.26171875-0.26171875i
-0.26367188-0.26367188i	-0.29687500-0.29687500i	-0.29882813+0.29882813i
-0.30078125+0.30078125i	0.30273438+0.30273438i	0.30468750+0.30468750i
0.30664063-0.30664063i	-0.30859375+0.30859375i	-0.31054688-0.31054688i
-0.28125000-0.28125000i	0.28320313-0.28320313i	0.28515625-0.28515625i
0.28710938+0.28710938i	0.28906250+0.28906250i	0.29101563-0.29101563i
0.29296875-0.29296875i	0.29492188+0.29492188i	0.32812500+0.32812500i
0.33007813-0.33007813i	-0.33203125+0.33203125i	0.33398438+0.33398438i
-0.33593750-0.33593750i	0.33789063-0.33789063i	-0.33984375+0.33984375i
-0.34179688-0.34179688i	-0.31250000-0.31250000i	-0.31445313+0.31445313i
-0.31640625+0.31640625i	0.31835938+0.31835938i	-0.32031250-0.32031250i
0.32226563-0.32226563i	0.32421875-0.32421875i	0.32617188+0.32617188i
-0.35937500-0.35937500i	0.36132813-0.36132813i	0.36328125-0.36328125i
0.36523438+0.36523438i	0.36718750+0.36718750i	-0.36914063+0.36914063i
0.37109375-0.37109375i	0.37304688+0.37304688i	-0.34375000-0.34375000i
-0.34570313+0.34570313i	0.34765625-0.34765625i	-0.34960938-0.34960938i
-0.35156250-0.35156250i	0.35351563-0.35351563i	0.35546875-0.35546875i
0.35742188+0.35742188i	-0.39062500-0.39062500i	-0.39257813+0.39257813i
0.39453125-0.39453125i	-0.39648438-0.39648438i	-0.39843750-0.39843750i
0.40039063-0.40039063i	-0.40234375+0.40234375i	-0.40429688-0.40429688i
0.37500000+0.37500000i	0.37695313-0.37695313i	0.37890625-0.37890625i
0.38085938+0.38085938i	0.38281250+0.38281250i	0.38476563-0.38476563i
0.38671875-0.38671875i	-0.38867188-0.38867188i	-0.42187500-0.42187500i
0.42382813-0.42382813i	0.42578125-0.42578125i	-0.42773438-0.42773438i
-0.42968750-0.42968750i	-0.43164063+0.43164063i	-0.43359375+0.43359375i
-0.43554688-0.43554688i	-0.40625000-0.40625000i	-0.40820313+0.40820313i
0.41015625-0.41015625i	0.41210938+0.41210938i	0.41406250+0.41406250i
0.41601563-0.41601563i	0.41796875-0.41796875i	0.41992188+0.41992188i
0.45312500+0.45312500i	-0.45507813+0.45507813i	-0.45703125+0.45703125i
-0.45898438-0.45898438i	0.46093750+0.46093750i	-0.46289063+0.46289063i
0.46484375-0.46484375i	0.46679688+0.46679688i	0.43750000+0.43750000i
-0.43945313+0.43945313i	-0.44140625+0.44140625i	0.44335938+0.44335938i
0.44531250+0.44531250i	0.44726563-0.44726563i	-0.44921875+0.44921875i
0.45117188+0.45117188i	-0.48437500-0.48437500i	0.48632813-0.48632813i
-0.48828125+0.48828125i	-0.49023438-0.49023438i	-0.49218750-0.49218750i
-0.49414063+0.49414063i	0.49609375-0.49609375i	0.49804688+0.49804688i
-0.46875000-0.46875000i	0.47070313-0.47070313i	0.47265625-0.47265625i
0.47460938+0.47460938i	-0.47656250-0.47656250i	-0.47851563+0.47851563i
-0.48046875+0.48046875i	0.48242188+0.48242188i	-0.01562500-0.01562500i
0.01757813-0.01757813i	-0.01953125+0.01953125i	-0.02148438-0.02148438i
-0.02343750-0.02343750i	-0.02539063+0.02539063i	-0.02734375+0.02734375i
0.02929688+0.02929688i	0.00000000+0.00000000i	-0.00195313+0.00195313i
-0.00390625+0.00390625i	0.00585938+0.00585938i	-0.00781250-0.00781250i
-0.00976563+0.00976563i	-0.01171875+0.01171875i	-0.01367188-0.01367188i
-0.04687500-0.04687500i	-0.04882813+0.04882813i	-0.05078125+0.05078125i
0.05273438+0.05273438i	-0.05468750-0.05468750i	-0.05664063+0.05664063i
0.05859375-0.05859375i	0.06054688+0.06054688i	-0.03125000-0.03125000i
-0.03320313+0.03320313i	0.03515625-0.03515625i	0.03710938+0.03710938i
-0.03906250-0.03906250i	0.04101563-0.04101563i	-0.04296875+0.04296875i
-0.04492188-0.04492188i	-0.07812500-0.07812500i	-0.08007813+0.08007813i

-0.08203125+0.08203125i	-0.08398438-0.08398438i	0.08593750+0.08593750i
-0.08789063+0.08789063i	0.08984375-0.08984375i	-0.09179688-0.09179688i
-0.06250000-0.06250000i	0.06445313-0.06445313i	0.06640625-0.06640625i
-0.06835938-0.06835938i	0.07031250+0.07031250i	-0.07226563+0.07226563i
0.07421875-0.07421875i	0.07617188+0.07617188i	-0.10937500-0.10937500i
0.11132813-0.11132813i	0.11328125-0.11328125i	0.11523438+0.11523438i
0.11718750+0.11718750i	-0.11914063+0.11914063i	-0.12109375+0.12109375i
-0.12304688-0.12304688i	0.09375000+0.09375000i	0.09570313-0.09570313i
0.09765625-0.09765625i	-0.09960938-0.09960938i	0.10156250+0.10156250i
-0.10351563+0.10351563i	0.10546875-0.10546875i	-0.10742188-0.10742188i
0.14062500+0.14062500i	0.14257813-0.14257813i	0.14453125-0.14453125i
0.14648438+0.14648438i	-0.14843750-0.14843750i	-0.15039063+0.15039063i
-0.15234375+0.15234375i	-0.15429688-0.15429688i	0.12500000+0.12500000i
-0.12695313+0.12695313i	-0.12890625+0.12890625i	0.13085938+0.13085938i
-0.13281250-0.13281250i	0.13476563-0.13476563i	-0.13671875+0.13671875i
0.13867188+0.13867188i	0.17187500+0.17187500i	-0.17382813+0.17382813i
0.17578125-0.17578125i	-0.17773438-0.17773438i	0.17968750+0.17968750i
0.18164063-0.18164063i	-0.18359375+0.18359375i	0.18554688+0.18554688i
-0.15625000-0.15625000i	-0.15820313+0.15820313i	-0.16015625+0.16015625i
-0.16210938-0.16210938i	-0.16406250-0.16406250i	0.16601563-0.16601563i
-0.16796875+0.16796875i	-0.16992188-0.16992188i	0.20312500+0.20312500i
0.20507813-0.20507813i	0.20703125-0.20703125i	0.20898438+0.20898438i
-0.21093750-0.21093750i	-0.21289063+0.21289063i	-0.21484375+0.21484375i
-0.21679688-0.21679688i	-0.18750000-0.18750000i	-0.18945313+0.18945313i
-0.19140625+0.19140625i	0.19335938+0.19335938i	-0.19531250-0.19531250i
0.19726563-0.19726563i	-0.19921875+0.19921875i	-0.20117188-0.20117188i
0.23437500+0.23437500i	0.23632813-0.23632813i	-0.23828125+0.23828125i
0.24023438+0.24023438i	0.24218750+0.24218750i	-0.24414063+0.24414063i
0.24609375-0.24609375i	-0.24804688-0.24804688i	0.21875000+0.21875000i
-0.22070313+0.22070313i	0.22265625-0.22265625i	0.22460938+0.22460938i
0.22656250+0.22656250i	0.22851563-0.22851563i	-0.23046875+0.23046875i
0.23242188+0.23242188i	0.54492188+0.54492188i	-0.54296875+0.54296875i
0.54101563-0.54101563i	0.53906250+0.53906250i	0.53710938+0.53710938i
-0.53515625+0.53515625i	0.53320313-0.53320313i	0.53125000+0.53125000i
-0.56054688-0.56054688i	-0.55859375+0.55859375i	-0.55664063+0.55664063i
0.55468750+0.55468750i	-0.55273438-0.55273438i	0.55078125-0.55078125i
0.54882813-0.54882813i	0.54687500+0.54687500i	-0.51367188-0.51367188i
0.51171875-0.51171875i	0.50976563-0.50976563i	-0.50781250-0.50781250i
-0.50585938-0.50585938i	-0.50390625+0.50390625i	0.50195313-0.50195313i
0.50000000+0.50000000i	0.52929688+0.52929688i	0.52734375-0.52734375i
0.52539063-0.52539063i	0.52343750+0.52343750i	-0.52148438-0.52148438i
-0.51953125+0.51953125i	0.51757813-0.51757813i	-0.51562500-0.51562500i
0.60742188+0.60742188i	-0.60546875+0.60546875i	-0.60351563+0.60351563i
0.60156250+0.60156250i	-0.59960938-0.59960938i	-0.59765625+0.59765625i
-0.59570313+0.59570313i	-0.59375000-0.59375000i	-0.62304688-0.62304688i
-0.62109375+0.62109375i	-0.61914063+0.61914063i	-0.61718750-0.61718750i
-0.61523438-0.61523438i	-0.61328125+0.61328125i	0.61132813-0.61132813i
-0.60937500-0.60937500i	0.57617188+0.57617188i	0.57421875-0.57421875i
0.57226563-0.57226563i	0.57031250+0.57031250i	-0.56835938-0.56835938i
0.56640625-0.56640625i	0.56445313-0.56445313i	0.56250000+0.56250000i
-0.59179688-0.59179688i	-0.58984375+0.58984375i	-0.58789063+0.58789063i
-0.58593750-0.58593750i	0.58398438+0.58398438i	0.58203125-0.58203125i
-0.58007813+0.58007813i	-0.57812500-0.57812500i	-0.66992188-0.66992188i
0.66796875-0.66796875i	-0.66601563+0.66601563i	-0.66406250-0.66406250i
-0.66210938-0.66210938i	-0.66015625+0.66015625i	0.65820313-0.65820313i
-0.65625000-0.65625000i	0.68554688+0.68554688i	-0.68359375+0.68359375i
0.68164063-0.68164063i	0.67968750+0.67968750i	0.67773438+0.67773438i
-0.67578125+0.67578125i	-0.67382813+0.67382813i	-0.67187500-0.67187500i
-0.63867188-0.63867188i	-0.63671875+0.63671875i	0.63476563-0.63476563i
0.63281250+0.63281250i	0.63085938+0.63085938i	0.62890625-0.62890625i

-0.62695313+0.62695313i	-0.62500000-0.62500000i	0.65429688+0.65429688i
-0.65234375+0.65234375i	0.65039063-0.65039063i	-0.64843750-0.64843750i
-0.64648438-0.64648438i	-0.64453125+0.64453125i	0.64257813-0.64257813i
0.64062500+0.64062500i	-0.73242188-0.73242188i	-0.73046875+0.73046875i
0.72851563-0.72851563i	0.72656250+0.72656250i	-0.72460938-0.72460938i
-0.72265625+0.72265625i	-0.72070313+0.72070313i	-0.71875000-0.71875000i
-0.74804688-0.74804688i	-0.74609375+0.74609375i	0.74414063-0.74414063i
-0.74218750-0.74218750i	0.74023438+0.74023438i	0.73828125-0.73828125i
-0.73632813+0.73632813i	0.73437500+0.73437500i	-0.70117188-0.70117188i
-0.69921875+0.69921875i	-0.69726563+0.69726563i	0.69531250+0.69531250i
-0.69335938-0.69335938i	0.69140625-0.69140625i	0.68945313-0.68945313i
0.68750000+0.68750000i	-0.71679688-0.71679688i	-0.71484375+0.71484375i
-0.71289063+0.71289063i	-0.71093750-0.71093750i	0.70898438+0.70898438i
-0.70703125+0.70703125i	0.70507813-0.70507813i	0.70312500+0.70312500i
0.79492188+0.79492188i	0.79296875-0.79296875i	0.79101563-0.79101563i
-0.78906250-0.78906250i	-0.78710938-0.78710938i	0.78515625-0.78515625i
0.78320313-0.78320313i	-0.78125000-0.78125000i	0.81054688+0.81054688i
-0.80859375+0.80859375i	-0.80664063+0.80664063i	-0.80468750-0.80468750i
0.80273438+0.80273438i	-0.80078125+0.80078125i	0.79882813-0.79882813i
-0.79687500-0.79687500i	-0.76367188-0.76367188i	-0.76171875+0.76171875i
-0.75976563+0.75976563i	0.75781250+0.75781250i	0.75585938+0.75585938i
-0.75390625+0.75390625i	0.75195313-0.75195313i	0.75000000+0.75000000i
0.77929688+0.77929688i	0.77734375-0.77734375i	-0.77539063+0.77539063i
0.77343750+0.77343750i	-0.77148438-0.77148438i	0.76953125-0.76953125i
-0.76757813+0.76757813i	-0.76562500-0.76562500i	-0.85742188-0.85742188i
0.85546875-0.85546875i	-0.85351563+0.85351563i	-0.85156250-0.85156250i
-0.84960938-0.84960938i	-0.84765625+0.84765625i	-0.84570313+0.84570313i
-0.84375000-0.84375000i	0.87304688+0.87304688i	-0.87109375+0.87109375i
0.86914063-0.86914063i	-0.86718750-0.86718750i	0.86523438+0.86523438i
0.86328125-0.86328125i	0.86132813-0.86132813i	-0.85937500-0.85937500i
-0.82617188-0.82617188i	-0.82421875+0.82421875i	0.82226563-0.82226563i
0.82031250+0.82031250i	0.81835938+0.81835938i	0.81640625-0.81640625i
0.81445313-0.81445313i	-0.81250000-0.81250000i	-0.84179688-0.84179688i
0.83984375-0.83984375i	-0.83789063+0.83789063i	0.83593750+0.83593750i
-0.83398438-0.83398438i	-0.83203125+0.83203125i	-0.83007813+0.83007813i
-0.82812500-0.82812500i	-0.91992188-0.91992188i	-0.91796875+0.91796875i
-0.91601563+0.91601563i	0.91406250+0.91406250i	-0.91210938-0.91210938i
0.91015625-0.91015625i	-0.90820313+0.90820313i	-0.90625000-0.90625000i
0.93554688+0.93554688i	0.93359375-0.93359375i	0.93164063-0.93164063i
0.92968750+0.92968750i	0.92773438+0.92773438i	-0.92578125+0.92578125i
-0.92382813+0.92382813i	0.92187500+0.92187500i	-0.88867188-0.88867188i
0.88671875-0.88671875i	-0.88476563+0.88476563i	0.88281250+0.88281250i
0.88085938+0.88085938i	-0.87890625+0.87890625i	0.87695313-0.87695313i
0.87500000+0.87500000i	0.90429688+0.90429688i	0.90234375-0.90234375i
-0.90039063+0.90039063i	0.89843750+0.89843750i	0.89648438+0.89648438i
-0.89453125+0.89453125i	0.89257813-0.89257813i	-0.89062500-0.89062500i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.97851563-0.97851563i
-0.97656250-0.97656250i	-0.97460938-0.97460938i	0.97265625-0.97265625i
0.97070313-0.97070313i	-0.96875000-0.96875000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	-0.95117188-0.95117188i	0.94921875-0.94921875i
-0.94726563+0.94726563i	-0.94531250-0.94531250i	-0.94335938-0.94335938i
-0.94140625+0.94140625i	0.93945313-0.93945313i	-0.93750000-0.93750000i
-0.96679688-0.96679688i	0.96484375-0.96484375i	0.96289063-0.96289063i
0.96093750+0.96093750i	-0.95898438-0.95898438i	0.95703125-0.95703125i
-0.95507813+0.95507813i	-0.95312500-0.95312500i	

Frame Number = 2
fineInputCtr = 5

0.16992188+0.16992188i	-0.16796875+0.16796875i	0.16601563-0.16601563i
0.16406250+0.16406250i	-0.16210938-0.16210938i	0.16015625-0.16015625i
0.15820313-0.15820313i	-0.15625000-0.15625000i	-0.18554688-0.18554688i
0.18359375-0.18359375i	0.18164063-0.18164063i	-0.17968750-0.17968750i
0.17773438+0.17773438i	0.17578125-0.17578125i	-0.17382813+0.17382813i
0.17187500+0.17187500i	-0.13867188-0.13867188i	-0.13671875+0.13671875i
-0.13476563+0.13476563i	-0.13281250-0.13281250i	-0.13085938-0.13085938i
0.12890625-0.12890625i	0.12695313-0.12695313i	-0.12500000-0.12500000i
0.15429688+0.15429688i	-0.15234375+0.15234375i	-0.15039063+0.15039063i
-0.14843750-0.14843750i	0.14648438+0.14648438i	0.14453125-0.14453125i
0.14257813-0.14257813i	-0.14062500-0.14062500i	-0.23242188-0.23242188i
-0.23046875+0.23046875i	-0.22851563+0.22851563i	-0.22656250-0.22656250i
0.22460938+0.22460938i	0.22265625-0.22265625i	0.22070313-0.22070313i
0.21875000+0.21875000i	-0.24804688-0.24804688i	-0.24609375+0.24609375i
-0.24414063+0.24414063i	0.24218750+0.24218750i	0.24023438+0.24023438i
-0.23828125+0.23828125i	0.23632813-0.23632813i	-0.23437500-0.23437500i
0.20117188+0.20117188i	-0.19921875+0.19921875i	0.19726563-0.19726563i
-0.19531250-0.19531250i	0.19335938+0.19335938i	0.19140625-0.19140625i
0.18945313-0.18945313i	-0.18750000-0.18750000i	0.21679688+0.21679688i
0.21484375-0.21484375i	-0.21289063+0.21289063i	-0.21093750-0.21093750i
-0.20898438-0.20898438i	0.20703125-0.20703125i	-0.20507813+0.20507813i
0.20312500+0.20312500i	-0.04492188-0.04492188i	-0.04296875+0.04296875i
-0.04101563+0.04101563i	-0.03906250-0.03906250i	-0.03710938-0.03710938i
-0.03515625+0.03515625i	0.03320313-0.03320313i	0.03125000+0.03125000i
0.06054688+0.06054688i	-0.05859375+0.05859375i	0.05664063-0.05664063i
0.05468750+0.05468750i	-0.05273438-0.05273438i	-0.05078125+0.05078125i
0.04882813-0.04882813i	0.04687500+0.04687500i	-0.01367188-0.01367188i
-0.01171875+0.01171875i	0.00976563-0.00976563i	-0.00781250-0.00781250i
-0.00585938-0.00585938i	-0.00390625+0.00390625i	-0.00195313+0.00195313i
0.00000000+0.00000000i	-0.02929688-0.02929688i	0.02734375-0.02734375i
0.02539063-0.02539063i	-0.02343750-0.02343750i	0.02148438+0.02148438i
-0.01953125+0.01953125i	-0.01757813+0.01757813i	-0.01562500-0.01562500i
-0.10742188-0.10742188i	0.10546875-0.10546875i	0.10351563-0.10351563i
-0.10156250-0.10156250i	0.09960938+0.09960938i	0.09765625-0.09765625i
-0.09570313+0.09570313i	0.09375000+0.09375000i	-0.12304688-0.12304688i
0.12109375-0.12109375i	0.11914063-0.11914063i	0.11718750+0.11718750i
0.11523438+0.11523438i	0.11328125-0.11328125i	-0.11132813+0.11132813i
0.10937500+0.10937500i	0.07617188+0.07617188i	0.07421875-0.07421875i
0.07226563-0.07226563i	0.07031250+0.07031250i	0.06835938+0.06835938i
-0.06640625+0.06640625i	-0.06445313+0.06445313i	-0.06250000-0.06250000i
-0.09179688-0.09179688i	0.08984375-0.08984375i	-0.08789063+0.08789063i
0.08593750+0.08593750i	-0.08398438-0.08398438i	0.08203125-0.08203125i
0.08007813-0.08007813i	-0.07812500-0.07812500i	0.41992188+0.41992188i
-0.41796875+0.41796875i	-0.41601563+0.41601563i	-0.41406250-0.41406250i
0.41210938+0.41210938i	-0.41015625+0.41015625i	-0.40820313+0.40820313i
0.40625000+0.40625000i	0.43554688+0.43554688i	0.43359375-0.43359375i
0.43164063-0.43164063i	0.42968750+0.42968750i	-0.42773438-0.42773438i
-0.42578125+0.42578125i	0.42382813-0.42382813i	0.42187500+0.42187500i
-0.38867188-0.38867188i	-0.38671875+0.38671875i	0.38476563-0.38476563i
0.38281250+0.38281250i	0.38085938+0.38085938i	-0.37890625+0.37890625i
0.37695313-0.37695313i	-0.37500000-0.37500000i	0.40429688+0.40429688i
0.40234375-0.40234375i	0.40039063-0.40039063i	-0.39843750-0.39843750i
0.39648438+0.39648438i	0.39453125-0.39453125i	0.39257813-0.39257813i
-0.39062500-0.39062500i	-0.48242188-0.48242188i	0.48046875-0.48046875i
0.47851563-0.47851563i	0.47656250+0.47656250i	0.47460938+0.47460938i
-0.47265625+0.47265625i	0.47070313-0.47070313i	-0.46875000-0.46875000i
0.49804688+0.49804688i	-0.49609375+0.49609375i	0.49414063-0.49414063i
0.49218750+0.49218750i	0.49023438+0.49023438i	-0.48828125+0.48828125i

−0.48632813+0.48632813i	−0.48437500−0.48437500i	0.45117188+0.45117188i
0.44921875−0.44921875i	0.44726563−0.44726563i	0.44531250+0.44531250i
−0.44335938−0.44335938i	0.44140625−0.44140625i	−0.43945313+0.43945313i
−0.43750000−0.43750000i	0.46679688+0.46679688i	−0.46484375+0.46484375i
0.46289063−0.46289063i	0.46093750+0.46093750i	0.45898438+0.45898438i
−0.45703125+0.45703125i	−0.45507813+0.45507813i	0.45312500+0.45312500i
0.29492188+0.29492188i	0.29296875−0.29296875i	−0.29101563+0.29101563i
0.28906250+0.28906250i	0.28710938+0.28710938i	−0.28515625+0.28515625i
−0.28320313+0.28320313i	0.28125000+0.28125000i	0.31054688+0.31054688i
−0.30859375+0.30859375i	−0.30664063+0.30664063i	−0.30468750−0.30468750i
0.30273438+0.30273438i	0.30078125−0.30078125i	0.29882813−0.29882813i
0.29687500+0.29687500i	−0.26367188−0.26367188i	0.26171875−0.26171875i
−0.25976563+0.25976563i	0.25781250+0.25781250i	0.25585938+0.25585938i
0.25390625−0.25390625i	0.25195313−0.25195313i	0.25000000+0.25000000i
−0.27929688−0.27929688i	−0.27734375+0.27734375i	−0.27539063+0.27539063i
−0.27343750−0.27343750i	0.27148438+0.27148438i	0.26953125−0.26953125i
−0.26757813+0.26757813i	0.26562500+0.26562500i	0.35742188+0.35742188i
0.35546875−0.35546875i	0.35351563−0.35351563i	−0.35156250−0.35156250i
−0.34960938−0.34960938i	0.34765625−0.34765625i	0.34570313−0.34570313i
0.34375000+0.34375000i	0.37304688+0.37304688i	−0.37109375+0.37109375i
0.36914063−0.36914063i	0.36718750+0.36718750i	0.36523438+0.36523438i
−0.36328125+0.36328125i	−0.36132813+0.36132813i	−0.35937500−0.35937500i
0.32617188+0.32617188i	0.32421875−0.32421875i	0.32226563−0.32226563i
0.32031250+0.32031250i	−0.31835938−0.31835938i	0.31640625−0.31640625i
−0.31445313+0.31445313i	0.31250000+0.31250000i	−0.34179688−0.34179688i
−0.33984375+0.33984375i	0.33789063−0.33789063i	0.33593750+0.33593750i
0.33398438+0.33398438i	0.33203125−0.33203125i	−0.33007813+0.33007813i
0.32812500+0.32812500i	−0.63671875+0.63671875i	−0.63867188−0.63867188i
−0.63281250−0.63281250i	−0.63476563+0.63476563i	−0.62890625+0.62890625i
0.63085938+0.63085938i	0.62500000+0.62500000i	−0.62695313+0.62695313i
0.65234375−0.65234375i	0.65429688+0.65429688i	0.64843750+0.64843750i
−0.65039063+0.65039063i	−0.64453125+0.64453125i	0.64648438+0.64648438i
−0.64062500−0.64062500i	−0.64257813+0.64257813i	0.66796875−0.66796875i
0.66992188+0.66992188i	−0.66406250−0.66406250i	−0.66601563+0.66601563i
−0.66015625+0.66015625i	0.66210938+0.66210938i	−0.65625000−0.65625000i
−0.65820313+0.65820313i	0.68359375−0.68359375i	−0.68554688−0.68554688i
0.67968750+0.67968750i	−0.68164063+0.68164063i	−0.67578125+0.67578125i
−0.67773438−0.67773438i	0.67187500+0.67187500i	0.67382813−0.67382813i
−0.69921875+0.69921875i	0.70117188+0.70117188i	0.69531250+0.69531250i
−0.69726563+0.69726563i	−0.69140625+0.69140625i	−0.69335938−0.69335938i
0.68750000+0.68750000i	−0.68945313+0.68945313i	0.71484375−0.71484375i
0.71679688+0.71679688i	0.71093750+0.71093750i	−0.71289063+0.71289063i
−0.70703125+0.70703125i	0.70898438+0.70898438i	−0.70312500−0.70312500i
0.70507813−0.70507813i	−0.73046875+0.73046875i	0.73242188+0.73242188i
−0.72656250−0.72656250i	−0.72851563+0.72851563i	−0.72265625+0.72265625i
−0.72460938−0.72460938i	−0.71875000−0.71875000i	−0.72070313+0.72070313i
0.74609375−0.74609375i	0.74804688+0.74804688i	0.74218750+0.74218750i
−0.74414063+0.74414063i	0.73828125−0.73828125i	−0.74023438−0.74023438i
−0.73437500−0.73437500i	0.73632813−0.73632813i	0.51171875−0.51171875i
0.51367188+0.51367188i	−0.50781250−0.50781250i	−0.50976563+0.50976563i
−0.50390625+0.50390625i	0.50585938+0.50585938i	−0.50000000−0.50000000i
0.50195313−0.50195313i	−0.52734375+0.52734375i	0.52929688+0.52929688i
−0.52343750−0.52343750i	0.52539063−0.52539063i	−0.51953125+0.51953125i
0.52148438+0.52148438i	−0.51562500−0.51562500i	0.51757813−0.51757813i
0.54296875−0.54296875i	0.54492188+0.54492188i	−0.53906250−0.53906250i
0.54101563−0.54101563i	−0.53515625+0.53515625i	−0.53710938−0.53710938i
0.53125000+0.53125000i	0.53320313−0.53320313i	−0.55859375+0.55859375i
0.56054688+0.56054688i	0.55468750+0.55468750i	0.55664063−0.55664063i
0.55078125−0.55078125i	−0.55273438−0.55273438i	0.54687500+0.54687500i
0.54882813−0.54882813i	0.57421875−0.57421875i	0.57617188+0.57617188i

-0.57031250-0.57031250i	-0.57226563+0.57226563i	0.56640625-0.56640625i
0.56835938+0.56835938i	0.56250000+0.56250000i	-0.56445313+0.56445313i
-0.58984375+0.58984375i	-0.59179688-0.59179688i	0.58593750+0.58593750i
0.58789063-0.58789063i	-0.58203125+0.58203125i	-0.58398438-0.58398438i
-0.57812500-0.57812500i	0.58007813-0.58007813i	0.60546875-0.60546875i
0.60742188+0.60742188i	-0.60156250-0.60156250i	-0.60351563+0.60351563i
0.59765625-0.59765625i	0.59960938+0.59960938i	0.59375000+0.59375000i
-0.59570313+0.59570313i	0.62109375-0.62109375i	-0.62304688-0.62304688i
0.61718750+0.61718750i	-0.61914063+0.61914063i	0.61328125-0.61328125i
-0.61523438-0.61523438i	0.60937500+0.60937500i	-0.61132813+0.61132813i
0.88671875-0.88671875i	0.88867188+0.88867188i	-0.88281250-0.88281250i
0.88476563-0.88476563i	-0.87890625+0.87890625i	0.88085938+0.88085938i
-0.87500000-0.87500000i	0.87695313-0.87695313i	-0.90234375+0.90234375i
0.90429688+0.90429688i	0.89843750+0.89843750i	-0.90039063+0.90039063i
-0.89453125+0.89453125i	-0.89648438-0.89648438i	-0.89062500-0.89062500i
-0.89257813+0.89257813i	-0.91796875+0.91796875i	-0.91992188-0.91992188i
0.91406250+0.91406250i	0.91601563-0.91601563i	-0.91015625+0.91015625i
-0.91210938-0.91210938i	-0.90625000-0.90625000i	0.90820313-0.90820313i
-0.93359375+0.93359375i	0.93554688+0.93554688i	0.92968750+0.92968750i
0.93164063-0.93164063i	-0.92578125+0.92578125i	0.92773438+0.92773438i
0.92187500+0.92187500i	0.92382813-0.92382813i	-0.94921875+0.94921875i
0.95117188+0.95117188i	-0.94531250-0.94531250i	0.94726563-0.94726563i
0.94140625-0.94140625i	-0.94335938-0.94335938i	0.93750000+0.93750000i
-0.93945313+0.93945313i	-0.96484375+0.96484375i	-0.96679688-0.96679688i
-0.96093750-0.96093750i	-0.96289063+0.96289063i	0.95703125-0.95703125i
-0.95898438-0.95898438i	0.95312500+0.95312500i	0.95507813-0.95507813i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.97656250+0.97656250i
-0.97851563+0.97851563i	-0.97265625+0.97265625i	0.97460938+0.97460938i
-0.96875000-0.96875000i	0.97070313-0.97070313i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	-0.76171875+0.76171875i	-0.76367188-0.76367188i
-0.75781250-0.75781250i	0.75976563-0.75976563i	0.75390625-0.75390625i
-0.75585938-0.75585938i	-0.75000000-0.75000000i	0.75195313-0.75195313i
-0.77734375+0.77734375i	-0.77929688-0.77929688i	0.77343750+0.77343750i
0.77539063-0.77539063i	0.76953125-0.76953125i	0.77148438+0.77148438i
0.76562500+0.76562500i	0.76757813-0.76757813i	0.79296875-0.79296875i
0.79492188+0.79492188i	0.78906250+0.78906250i	-0.79101563+0.79101563i
-0.78515625+0.78515625i	-0.78710938-0.78710938i	-0.78125000-0.78125000i
0.78320313-0.78320313i	0.80859375-0.80859375i	-0.81054688-0.81054688i
-0.80468750-0.80468750i	-0.80664063+0.80664063i	-0.80078125+0.80078125i
0.80273438+0.80273438i	0.79687500+0.79687500i	-0.79882813+0.79882813i
0.82421875-0.82421875i	0.82617188+0.82617188i	0.82031250+0.82031250i
-0.82226563+0.82226563i	-0.81640625+0.81640625i	0.81835938+0.81835938i
-0.81250000-0.81250000i	0.81445313-0.81445313i	0.83984375-0.83984375i
0.84179688+0.84179688i	0.83593750+0.83593750i	0.83789063-0.83789063i
0.83203125-0.83203125i	-0.83398438-0.83398438i	0.82812500+0.82812500i
0.83007813-0.83007813i	-0.85546875+0.85546875i	0.85742188+0.85742188i
0.85156250+0.85156250i	-0.85351563+0.85351563i	0.84765625-0.84765625i
-0.84960938-0.84960938i	0.84375000+0.84375000i	-0.84570313+0.84570313i
0.87109375-0.87109375i	0.87304688+0.87304688i	0.86718750+0.86718750i
0.86914063-0.86914063i	-0.86328125+0.86328125i	-0.86523438-0.86523438i
-0.85937500-0.85937500i	0.86132813-0.86132813i	

Frame Number = 3
fineInputCtr = 10

-0.20507813+0.20507813i	-0.20312500-0.20312500i	-0.20898438-0.20898438i
-0.20703125+0.20703125i	0.21289063-0.21289063i	-0.21093750-0.21093750i
-0.21679688-0.21679688i	0.21484375-0.21484375i	-0.18945313+0.18945313i
-0.18750000-0.18750000i	-0.19335938-0.19335938i	0.19140625-0.19140625i
-0.19726563+0.19726563i	-0.19531250-0.19531250i	0.20117188+0.20117188i
-0.19921875+0.19921875i	-0.23632813+0.23632813i	0.23437500+0.23437500i
-0.24023438-0.24023438i	-0.23828125+0.23828125i	-0.24414063+0.24414063i
-0.24218750-0.24218750i	0.24804688+0.24804688i	0.24609375-0.24609375i
0.22070313-0.22070313i	-0.21875000-0.21875000i	-0.22460938-0.22460938i
-0.22265625+0.22265625i	0.22851563-0.22851563i	0.22656250+0.22656250i
0.23242188+0.23242188i	-0.23046875+0.23046875i	0.14257813-0.14257813i
0.14062500+0.14062500i	0.14648438+0.14648438i	-0.14453125+0.14453125i
0.15039063-0.15039063i	0.14843750+0.14843750i	-0.15429688-0.15429688i
0.15234375-0.15234375i	0.12695313-0.12695313i	-0.12500000-0.12500000i
0.13085938+0.13085938i	-0.12890625+0.12890625i	0.13476563-0.13476563i
0.13281250+0.13281250i	-0.13867188-0.13867188i	0.13671875-0.13671875i
-0.17382813+0.17382813i	0.17187500+0.17187500i	0.17773438+0.17773438i
0.17578125-0.17578125i	0.18164063-0.18164063i	-0.17968750-0.17968750i
-0.18554688-0.18554688i	0.18359375-0.18359375i	0.15820313-0.15820313i
-0.15625000-0.15625000i	-0.16210938-0.16210938i	0.16015625-0.16015625i
-0.16601563+0.16601563i	-0.16406250-0.16406250i	-0.16992188-0.16992188i
0.16796875-0.16796875i	0.08007813-0.08007813i	-0.07812500-0.07812500i
-0.08398438-0.08398438i	-0.08203125+0.08203125i	-0.08789063+0.08789063i
-0.08593750-0.08593750i	-0.09179688-0.09179688i	0.08984375-0.08984375i
0.06445313-0.06445313i	0.06250000+0.06250000i	0.06835938+0.06835938i
0.06640625-0.06640625i	0.07226563-0.07226563i	-0.07031250-0.07031250i
-0.07617188-0.07617188i	0.07421875-0.07421875i	0.11132813-0.11132813i
-0.10937500-0.10937500i	0.11523438+0.11523438i	-0.11328125+0.11328125i
0.11914063-0.11914063i	0.11718750+0.11718750i	0.12304688+0.12304688i
0.12109375-0.12109375i	-0.09570313+0.09570313i	0.09375000+0.09375000i
0.09960938+0.09960938i	0.09765625-0.09765625i	-0.10351563+0.10351563i
0.10156250+0.10156250i	-0.10742188-0.10742188i	-0.10546875+0.10546875i
0.01757813-0.01757813i	-0.01562500-0.01562500i	-0.02148438-0.02148438i
-0.01953125+0.01953125i	-0.02539063+0.02539063i	0.02343750+0.02343750i
-0.02929688-0.02929688i	-0.02734375+0.02734375i	0.00195313-0.00195313i
0.00000000+0.00000000i	0.00585938+0.00585938i	0.00390625-0.00390625i
-0.00976563+0.00976563i	-0.00781250-0.00781250i	0.01367188+0.01367188i
0.01171875-0.01171875i	-0.04882813+0.04882813i	-0.04687500-0.04687500i
0.05273438+0.05273438i	0.05078125-0.05078125i	-0.05664063+0.05664063i
-0.05468750-0.05468750i	-0.06054688-0.06054688i	0.05859375-0.05859375i
0.03320313-0.03320313i	0.03125000+0.03125000i	-0.03710938-0.03710938i
0.03515625-0.03515625i	-0.04101563+0.04101563i	-0.03906250-0.03906250i
0.04492188+0.04492188i	-0.04296875+0.04296875i	-0.45507813+0.45507813i
0.45312500+0.45312500i	0.45898438+0.45898438i	-0.45703125+0.45703125i
0.46289063-0.46289063i	-0.46093750-0.46093750i	0.46679688+0.46679688i
-0.46484375+0.46484375i	-0.43945313+0.43945313i	0.43750000+0.43750000i
-0.44335938-0.44335938i	0.44140625-0.44140625i	-0.44726563+0.44726563i
-0.44531250-0.44531250i	0.45117188+0.45117188i	-0.44921875+0.44921875i
-0.48632813+0.48632813i	-0.48437500-0.48437500i	0.49023438+0.49023438i
-0.48828125+0.48828125i	-0.49414063+0.49414063i	0.49218750+0.49218750i
-0.49804688-0.49804688i	0.49609375-0.49609375i	-0.47070313+0.47070313i
-0.46875000-0.46875000i	0.47460938+0.47460938i	-0.47265625+0.47265625i
-0.47851563+0.47851563i	0.47656250+0.47656250i	0.48242188+0.48242188i
-0.48046875+0.48046875i	0.39257813-0.39257813i	0.39062500+0.39062500i
0.39648438+0.39648438i	0.39453125-0.39453125i	-0.40039063+0.40039063i
-0.39843750-0.39843750i	0.40429688+0.40429688i	0.40234375-0.40234375i
0.37695313-0.37695313i	-0.37500000-0.37500000i	-0.38085938-0.38085938i
0.37890625-0.37890625i	0.38476563-0.38476563i	-0.38281250-0.38281250i

-0.38867188-0.38867188i	-0.38671875+0.38671875i	0.42382813-0.42382813i
0.42187500+0.42187500i	-0.42773438-0.42773438i	-0.42578125+0.42578125i
0.43164063-0.43164063i	-0.42968750-0.42968750i	-0.43554688-0.43554688i
-0.43359375+0.43359375i	-0.40820313+0.40820313i	-0.40625000-0.40625000i
0.41210938+0.41210938i	-0.41015625+0.41015625i	0.41601563-0.41601563i
0.41406250+0.41406250i	-0.41992188-0.41992188i	-0.41796875+0.41796875i
0.33007813-0.33007813i	0.32812500+0.32812500i	0.33398438+0.33398438i
0.33203125-0.33203125i	-0.33789063+0.33789063i	0.33593750+0.33593750i
-0.34179688-0.34179688i	0.33984375-0.33984375i	-0.31445313+0.31445313i
0.31250000+0.31250000i	0.31835938+0.31835938i	-0.31640625+0.31640625i
0.32226563-0.32226563i	0.32031250+0.32031250i	-0.32617188-0.32617188i
0.32421875-0.32421875i	0.36132813-0.36132813i	-0.35937500-0.35937500i
0.36523438+0.36523438i	-0.36328125+0.36328125i	-0.36914063+0.36914063i
0.36718750+0.36718750i	-0.37304688-0.37304688i	0.37109375-0.37109375i
0.34570313-0.34570313i	-0.34375000-0.34375000i	-0.34960938-0.34960938i
-0.34765625+0.34765625i	-0.35351563+0.35351563i	-0.35156250-0.35156250i
0.35742188+0.35742188i	-0.35546875+0.35546875i	-0.26757813+0.26757813i
0.26562500+0.26562500i	-0.27148438-0.27148438i	0.26953125-0.26953125i
-0.27539063+0.27539063i	-0.27343750-0.27343750i	0.27929688+0.27929688i
-0.27734375+0.27734375i	0.25195313-0.25195313i	-0.25000000-0.25000000i
-0.25585938-0.25585938i	0.25390625-0.25390625i	-0.25976563+0.25976563i
-0.25781250-0.25781250i	0.26367188+0.26367188i	0.26171875-0.26171875i
-0.29882813+0.29882813i	0.29687500+0.29687500i	-0.30273438-0.30273438i
0.30078125-0.30078125i	-0.30664063+0.30664063i	0.30468750+0.30468750i
-0.31054688-0.31054688i	0.30859375-0.30859375i	0.28320313-0.28320313i
0.28125000+0.28125000i	-0.28710938-0.28710938i	-0.28515625+0.28515625i
-0.29101563+0.29101563i	0.28906250+0.28906250i	0.29492188+0.29492188i
0.29296875-0.29296875i	0.77539063-0.77539063i	0.77343750+0.77343750i
0.77929688+0.77929688i	0.77734375-0.77734375i	0.76757813-0.76757813i
-0.76562500-0.76562500i	-0.77148438-0.77148438i	0.76953125-0.76953125i
-0.75976563+0.75976563i	0.75781250+0.75781250i	-0.76367188-0.76367188i
0.76171875-0.76171875i	0.75195313-0.75195313i	-0.75000000-0.75000000i
-0.75585938-0.75585938i	-0.75390625+0.75390625i	0.80664063-0.80664063i
0.80468750+0.80468750i	0.81054688+0.81054688i	0.80859375-0.80859375i
0.79882813-0.79882813i	0.79687500+0.79687500i	-0.80273438-0.80273438i
-0.80078125+0.80078125i	-0.79101563+0.79101563i	-0.78906250-0.78906250i
-0.79492188-0.79492188i	0.79296875-0.79296875i	-0.78320313+0.78320313i
-0.78125000-0.78125000i	-0.78710938-0.78710938i	-0.78515625+0.78515625i
0.83789063-0.83789063i	-0.83593750-0.83593750i	0.84179688+0.84179688i
0.83984375-0.83984375i	0.83007813-0.83007813i	0.82812500+0.82812500i
0.83398438+0.83398438i	-0.83203125+0.83203125i	-0.82226563+0.82226563i
0.82031250+0.82031250i	-0.82617188-0.82617188i	0.82421875-0.82421875i
0.81445313-0.81445313i	0.81250000+0.81250000i	-0.81835938-0.81835938i
-0.81640625+0.81640625i	-0.86914063+0.86914063i	0.86718750+0.86718750i
-0.87304688-0.87304688i	0.87109375-0.87109375i	-0.86132813+0.86132813i
-0.85937500-0.85937500i	0.86523438+0.86523438i	-0.86328125+0.86328125i
0.85351563-0.85351563i	0.85156250+0.85156250i	-0.85742188-0.85742188i
0.85546875-0.85546875i	-0.84570313+0.84570313i	-0.84375000-0.84375000i
0.84960938+0.84960938i	0.84765625-0.84765625i	0.90039063-0.90039063i
0.89843750+0.89843750i	-0.90429688-0.90429688i	-0.90234375+0.90234375i
0.89257813-0.89257813i	0.89062500+0.89062500i	0.89648438+0.89648438i
-0.89453125+0.89453125i	0.88476563-0.88476563i	0.88281250+0.88281250i
0.88867188+0.88867188i	-0.88671875+0.88671875i	0.87695313-0.87695313i
-0.87500000-0.87500000i	0.88085938+0.88085938i	-0.87890625+0.87890625i
0.93164063-0.93164063i	0.92968750+0.92968750i	-0.93554688-0.93554688i
-0.93359375+0.93359375i	0.92382813-0.92382813i	-0.92187500-0.92187500i
0.92773438+0.92773438i	-0.92578125+0.92578125i	0.91601563-0.91601563i
0.91406250+0.91406250i	-0.91992188-0.91992188i	-0.91796875+0.91796875i
0.90820313-0.90820313i	0.90625000+0.90625000i	-0.91210938-0.91210938i
0.91015625-0.91015625i	-0.96289063+0.96289063i	0.96093750+0.96093750i

0.96679688+0.96679688i	-0.96484375+0.96484375i	-0.95507813+0.95507813i
0.95312500+0.95312500i	-0.95898438-0.95898438i	0.95703125-0.95703125i
0.94726563-0.94726563i	0.94531250+0.94531250i	0.95117188+0.95117188i
-0.94921875+0.94921875i	-0.93945313+0.93945313i	0.93750000+0.93750000i
-0.94335938-0.94335938i	0.94140625-0.94140625i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.00000000+0.00000000i	0.00000000+0.00000000i
0.00000000+0.00000000i	0.97851563-0.97851563i	0.97656250+0.97656250i
0.00000000+0.00000000i	0.00000000+0.00000000i	-0.97070313+0.97070313i
-0.96875000-0.96875000i	0.97460938+0.97460938i	0.97265625-0.97265625i
0.52539063-0.52539063i	-0.52343750-0.52343750i	-0.52929688-0.52929688i
-0.52734375+0.52734375i	-0.51757813+0.51757813i	-0.51562500-0.51562500i
0.52148438+0.52148438i	0.51953125-0.51953125i	-0.50976563+0.50976563i
0.50781250+0.50781250i	0.51367188+0.51367188i	0.51171875-0.51171875i
-0.50195313+0.50195313i	-0.50000000-0.50000000i	-0.50585938-0.50585938i
-0.50390625+0.50390625i	0.55664063-0.55664063i	-0.55468750-0.55468750i
-0.56054688-0.56054688i	-0.55859375+0.55859375i	0.54882813-0.54882813i
0.54687500+0.54687500i	0.55273438+0.55273438i	-0.55078125+0.55078125i
-0.54101563+0.54101563i	-0.53906250-0.53906250i	0.54492188+0.54492188i
0.54296875-0.54296875i	-0.53320313+0.53320313i	-0.53125000-0.53125000i
0.53710938+0.53710938i	-0.53515625+0.53515625i	-0.58789063+0.58789063i
0.58593750+0.58593750i	0.59179688+0.59179688i	-0.58984375+0.58984375i
-0.58007813+0.58007813i	-0.57812500-0.57812500i	0.58398438+0.58398438i
0.58203125-0.58203125i	0.57226563-0.57226563i	-0.57031250-0.57031250i
0.57617188+0.57617188i	-0.57421875+0.57421875i	-0.56445313+0.56445313i
0.56250000+0.56250000i	-0.56835938-0.56835938i	-0.56640625+0.56640625i
-0.61914063+0.61914063i	0.61718750+0.61718750i	0.62304688+0.62304688i
0.62109375-0.62109375i	-0.61132813+0.61132813i	0.60937500+0.60937500i
-0.61523438-0.61523438i	0.61328125-0.61328125i	0.60351563-0.60351563i
0.60156250+0.60156250i	0.60742188+0.60742188i	-0.60546875+0.60546875i
0.59570313-0.59570313i	-0.59375000-0.59375000i	-0.59960938-0.59960938i
-0.59765625+0.59765625i	0.65039063-0.65039063i	-0.64843750-0.64843750i
0.65429688+0.65429688i	0.65234375-0.65234375i	0.64257813-0.64257813i
0.64062500+0.64062500i	0.64648438+0.64648438i	-0.64453125+0.64453125i
-0.63476563+0.63476563i	0.63281250+0.63281250i	0.63867188+0.63867188i
-0.63671875+0.63671875i	-0.62695313+0.62695313i	0.62500000+0.62500000i
-0.63085938-0.63085938i	0.62890625-0.62890625i	-0.68164063+0.68164063i
0.67968750+0.67968750i	-0.68554688-0.68554688i	-0.68359375+0.68359375i
-0.67382813+0.67382813i	-0.67187500-0.67187500i	-0.67773438-0.67773438i
-0.67578125+0.67578125i	0.66601563-0.66601563i	0.66406250+0.66406250i
-0.66992188-0.66992188i	0.66796875-0.66796875i	-0.65820313+0.65820313i
-0.65625000-0.65625000i	0.66210938+0.66210938i	0.66015625-0.66015625i
-0.71289063+0.71289063i	-0.71093750-0.71093750i	-0.71679688-0.71679688i
-0.71484375+0.71484375i	0.70507813-0.70507813i	0.70312500+0.70312500i
0.70898438+0.70898438i	-0.70703125+0.70703125i	-0.69726563+0.69726563i
-0.69531250-0.69531250i	-0.70117188-0.70117188i	0.69921875-0.69921875i
0.68945313-0.68945313i	0.68750000+0.68750000i	0.69335938+0.69335938i
-0.69140625+0.69140625i	0.74414063-0.74414063i	0.74218750+0.74218750i
0.74804688+0.74804688i	-0.74609375+0.74609375i	0.73632813-0.73632813i
-0.73437500-0.73437500i	0.74023438+0.74023438i	-0.73828125+0.73828125i
0.72851563-0.72851563i	-0.72656250-0.72656250i	0.73242188+0.73242188i
-0.73046875+0.73046875i	-0.72070313+0.72070313i	0.71875000+0.71875000i
0.72460938+0.72460938i	0.72265625-0.72265625i	